

Pumping Up 3.1:  
Help for an Aging  
Windows-p. 21

Making Sense of  
the Census-p. 32

E-Books: Changing  
How We Read-p. 42

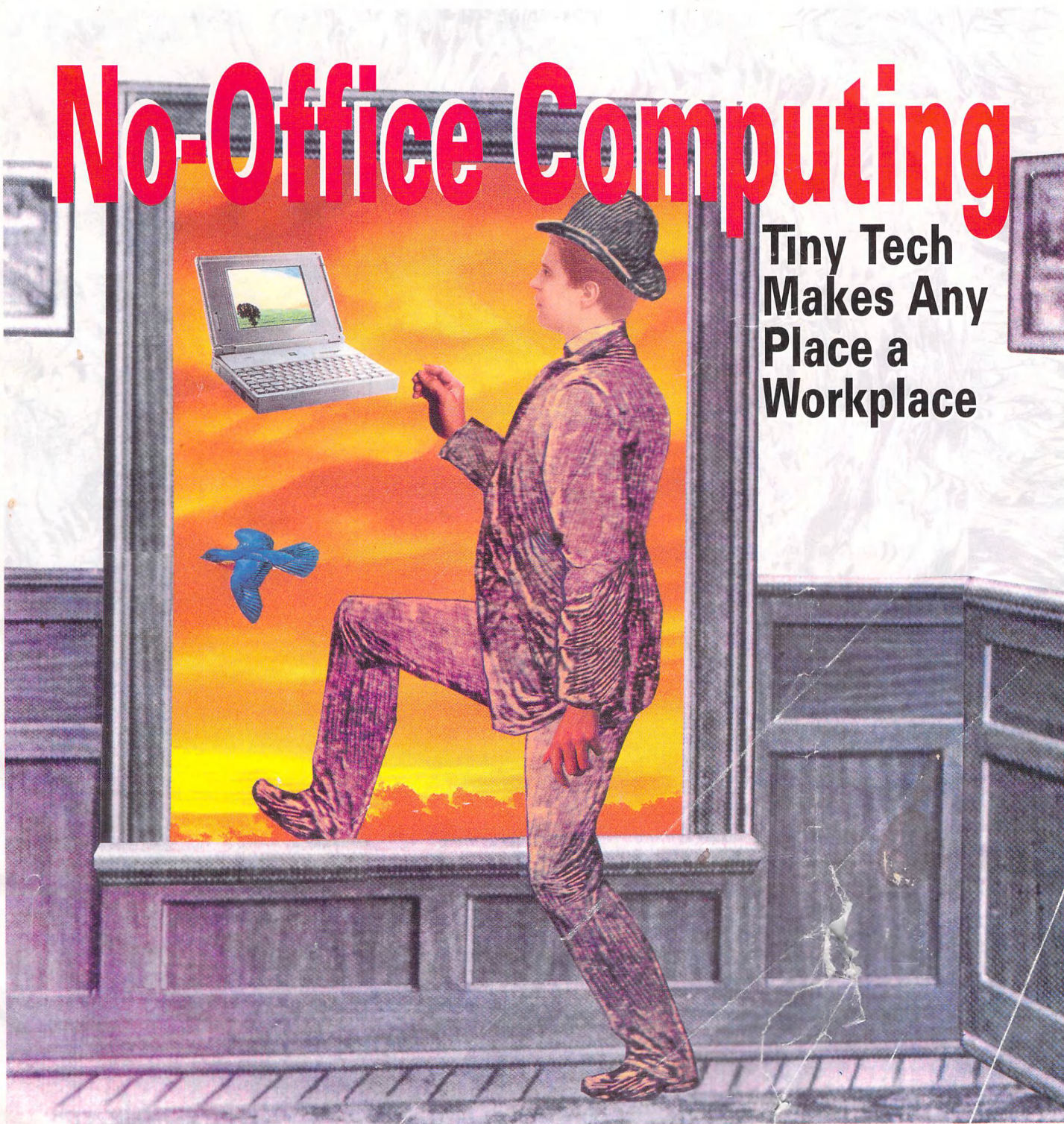
OCTOBER 1994

# COMPU SERVE

M A G A Z I N E

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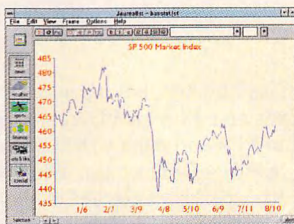
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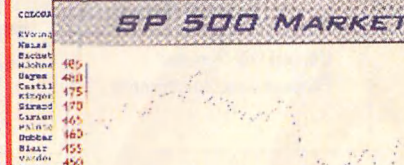
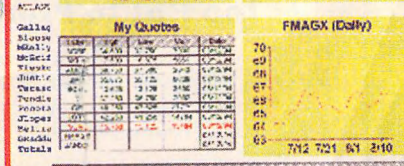
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# CONTENTS

## FEATURES

### Feature Story

#### 10 No-Office Computing

Since professionals can no longer depend on clients landing on their doorsteps, they must go where the business is, leaving their desk and taking, in essence, the entire office with them on calls. Using laptop and notebook computers and personal digital assistants, these mobile mavens of "tiny tech" are making any old place their workplace. Plus: Tips for business "road warriors"; PDA interfaces to CompuServe; picking a portable; the little PCMCIA cards' big future; mobile-computing favorite files.

### Computing Services

#### 21 Filling in Windows' Cracks

Microsoft's millions-selling program isn't broken, but it's not exactly new: version 3.1 was released in May 1992, when '386s and 16-color VGA cards were the norm. That same program now lives on Pentium PCs and runs CD-ROMs and 16 million color video cards. Until 3.1's successor, "Chicago," shows up, Windows users must keep searching for new ways to wring better performance out of the aging environment. With: Visual Basic and VBRUN files explained; fix-'er-up files.

#### 28 Viruses: Gone or Just Forgotten?

The media hype has disintegrated, but the increasingly crafty and destructive disk-space invaders haven't gone away.

### Personal Enterprise

#### 32 People, by the Numbers

The statistical study of human populations may not sound like a topic worthy of investigation, but the data it spawns, known as demographics, can give small businesses information critical to their prosperity. Obtaining the data online can help you best decide what advertising to buy and in what directions to expand. Also: How to search online census data; overview of demographic databases.

#### 38 Call Them "Elderpreneurs":

Seniors not ready for the complete lifestyle switch to retirement are turning to small-scale second careers for fulfillment.

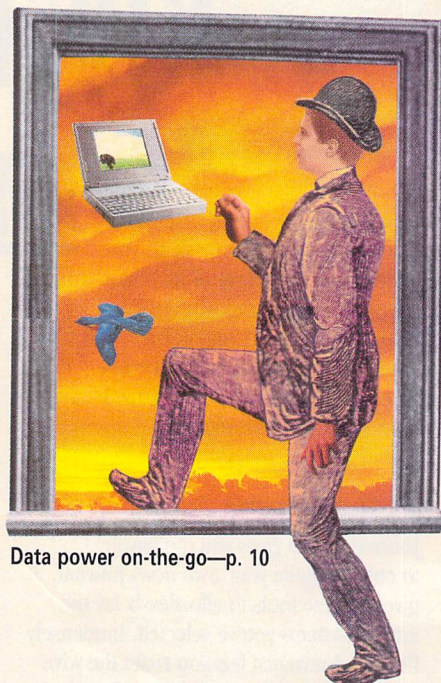
### Random Access

#### 42 Paperback to the Future

Electronic books—stories stored on floppies, CD-ROMs, or memory cards—may offer bookworms a new kind of literature to crawl through. More than page-to-screen repackagings, e-books' hyperlinked structures create narratives that are explored, not followed, and may be harbingers of entirely new forms of publishing artistry. Includes: The making of e-books; online e-books and authoring programs.

#### 48 Animal Rights and Wrongs:

Want the pitter-pat of little paws about your house? Picking a good pet means matching a creature to your already established comforts.



Data power on-the-go—p. 10



The numbers that count—p. 32

## Too Hot to Print

► Catch computer-industry news as it happens, read today's news, commentary, and product reviews. You'll find it only in Online Today, a daily updated newspaper.

Online Today Guide	OLT-5
Today's News	OLT-90
Behind the Screens	OLT-130
Product Announcements	OLT-200

## DEPARTMENTS

3	Dear Reader	56	Book Reviews
4	Letters	62	Readers' Writes
6	Monitor	64	Update: Last-Minute News
54	Downloadable Notables		

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# COMPU SERVE

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## Dear Reader

A big future is at hand for personal digital assistants as they bridge the gap between fun gadgets and powerful systems. Taking part in that future, CompuServe is developing interfaces for these small wonders that operate on GEOS, Magic Cap, and the upcoming WinPad operating systems. That means selected parts of the Information Service, such as weather, stock quotes, and news, can be accessed anywhere at any time with mere handheld devices. (For more information, see "CompuServe, PDA-Style," on page 13.)

But PDA developments are just the tip of the mobile-technology iceberg. PCMCIA cards add unprecedented memory and versatility to handheld and notebook computers, and wireless communication, although costly at this point, is making inroads to common usage. As the magazine goes to press, a new wireless-communications forum, to be managed by MAUG chief sysop Neil Shapiro and Palmtop chief sysop Ron Luks, is in the works. Watch What's New for further developments, or type FIND WIRELESS, a command that will take you to the forum when it's available.

What's at stake in the mobile-computing arena, and how is it going to shake out? For one thing, the office is no longer the place we have to be to get our work done. The power and connectivity of today's mobile computers allow once deskbound employees to download office files, link with desktop computers, and search corporate databases while on the road, as you'll discover when you read "No-Office Computing," beginning on page 10. But what will these mobile CompuServe members be doing a few years from now? Dictating information into their PDAs while on the road, then beaming the information via infrared links into the office desktop? It could happen.

\* \* \*

A few months ago CompuServe's real-time news editor cruised the Internet and, afterward, installed new software on his NEC Versa notebook. He was delighted to discover that a new screen saver came with the software, or so he thought. It turned out to be a virus, which he contracted from either the Internet or the new software.

Even though viruses no longer dominate computer news, we still need to heed their threat. That's why we looked into the current state of computer-virus affairs with "Viruses: Gone or Just Forgotten?" on page 28. Viruses are here to stay, and it's important that we all develop antivirus prevention strategies.

Furthermore, we should be concerned about the ethical issues raised by virus creation and distribution. To that end, the Computer Ethics Institute launched the National Computer Ethics & Responsibilities Campaign last June. Chaired by Dr. Peter Tippett, Symantec's director of security and enterprise products, and Nick Routledge, a Los Angeles-based computer consultant, the two-year campaign encourages BBS operators, corporations, and educators to promote ethical computing practices. CompuServe is one of many sponsors of the campaign, along with Symantec, the Software Publishers Association, Ziff-Davis, and the National Computer Security Association, whose CompuServe forum is the project's official bulletin board. Read "Code of Dishonor? The Ethics of Computing," on page 29, to learn more about the new NCSA InfoSecurity Forum, and GO CETHICS for more information on this important campaign.

Kassie Rose  
Editor



## Multimedia

I would like to comment on "Multimedia Turns On" (July, p. 10). I, too, enjoy the benefits of multimedia on my home computer. John Edwards states that "multimedia can exist on platforms as diverse as IBM PCs and compatibles (both DOS- and Windows-based models), Macintosh systems, Amiga and Atari computers." I guess that means my home computer, which is running OS/2, doesn't fit Mr. Edwards's paradigm. I enjoy running OS/2 multimedia applications, as well as my DOS- and Windows-based multimedia applications. I think OS/2 is undeservedly suffering from the Rodney Dangerfield complex (it never gets any respect).

Victor M. Palma Jr.  
Tumwater, Washington  
73531,3226

## Electronic Résumés

Martha Barnette's interesting article on electronic and multimedia résumés ("A Digital Curriculum Vitae," July, p. 33) provides some very useful technical tips for users. However, as a labor-relations and human-resources consultant, I take issue with several of the suggestions presented in the article.

The inclusion of personal or family photographs or information will surely scare off any civil-rights-conscious recruiter. Such matters are clearly an affront to Equal Employment Opportunity guidelines and related federal legislation. Employers cannot ask questions regarding an applicant's sex, age, race, marital or family status, and other such factors, nor should applicants volunteer such information. Providing personal or family photos is tantamount to such practices. Of course, someone applying for a modeling position may have legitimate reason to include photographs. An architect or advertising executive could also make good use of multimedia in showing his creative output.

Errol J. Queen, Ph.D.  
Naples, Florida  
71652,3416

## "Green" PCs

I disagree with those who feel that "green" machines are just a sales tool, as described by one member in "Is 'Green' Just a Dream?" (July, p. 7). While it may not make an instant return on investment to the single PC owner, it is a major money saver within industry. At my job we have just finished an extensive study of a device that shuts off monitors after a certain period

of keyboard inactivity, as determined by the user. We are proceeding with a pilot project to equip 20,000 PCs with the device and anticipating annual savings to be about \$2 million. As my company runs more than 100,000 PCs, I expect the project to expand significantly after the initial pilot verifies the savings.

It isn't often that helping the environment can actually pay a cash dividend. If any members are interested in this or other projects my company is engaged in to protect the environment while saving money, contact me via e-mail.

Everett Cole  
Concord, California  
74640,2743

## Behind the Screens

John Edwards's recent column "Crazy, Mazy Internet" (July, p. 8) illustrates the ignorance of most CompuServe users regarding the power and scope of the Internet. As a CompuServe and Internet user, I value the mail, forums, and other services that both allow me to access.

However, the service of the future is the Internet. It not only carries millions of pieces of mail and other messages, but is a vast repository for all kinds of information. True, it is often difficult to navigate, but commercial entities are working to provide tools to remedy that. To cast the Internet in a bad light because of its vast scope is the same as bad-mouthing an unfamiliar city because you can't find an address there. The information is there, and it's worth finding. It just takes some effort.

Matt Brown  
Lombard, Illinois  
74534,1176

It doesn't take a rocket scientist to figure out why a contributing editor of your magazine would be bashing the Internet. Nor does it take one to use the Internet, as John Edwards implies.

Anyone with the slightest online experience or who has the ability to set the clock on a VCR has the mental agility necessary to use the Internet. Though a user of both CompuServe and the Internet, I first look to the Internet when searching for resources. I'm seldom disappointed, and I spend less time and money in the process.

I suggest that Mr. Edwards take a second, unbiased look at the Internet, after he sets the clock on his VCR.

Steve Campbell  
Farrell, Pennsylvania  
71360,1614

## Used Computers

For me, "Used but Not Used Up" (July, p. 26) was timely. I have conducted several trades, sales, and purchases via CompuServe lately, and I agree that there is a high degree of trust and integrity on the network, but the article did not give any suggestions for those who get burned.

Recently I "traded" a modem to an individual in return for unopened and unregistered software. The terms and conditions of our agreement were clearly outlined. The software has never arrived. I've written this off as an unfortunate occurrence, but I wonder what recourse I have. Now I always contact the person by phone to finalize the agreement and obtain a shipping number for the goods traded.

Steven E. Bowers  
Tucson, Arizona  
73612,1172

## Internet Mailing Lists

I am not a CompuServe member, but I saw the June issue's article "Mail-Order E-mail: Getting on an Internet List" (p. 8). It contains incomplete information about subscribing to Internet mailing lists.

There are several kinds of mailing lists on the Internet. One of the more common is implemented using LISTSERV, while another is not. The article explained how to subscribe to the LISTSERV mailing list. Here is how to subscribe to the other:

Suppose the mailing list is called "gumbo creole.com." Send a mail message to ">INTERNET:gumbo-request@creole.com," adding a "request" to the end of the mailing-list name. This directs the message to the person maintaining the list. If you instead send a message to ">INTERNET:gumbo@creole.com," the message will go directly to each subscriber of the list. You should send mail directly to the list only if the "request" bounces back with an error message such as "no such user."

Bruce Barnett  
Schenectady, New York  
<barnett@crd.ge.com>

## Correction

In "Archive Photos Forum Offers More History" (August, p. 42), images from the Archive Photos Forum libraries were reported to be supplied by the U.S. National Archives in Washington, D.C. They are supplied by the collections of Archive Photos and Archive Films, a leading source of historical engravings, drawings, and photographs based in New York City.





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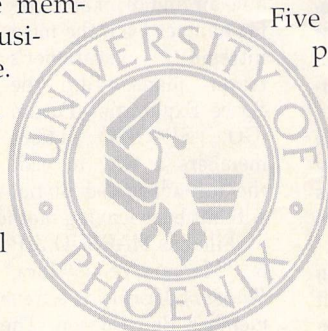
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# MONITOR

## A Bee-utiful Educational Tool

How do you spell "Jell-O"?

This is one of the first questions journalism professor Michael Abrams asks his students at Florida A&M University, and the answers are usually wrong. "It may be a favorite food, but like many things we see every day, it is more often misspelled than not," he says.

Spelling is key to success in many endeavors. To make it more fun, Abrams has written World Championship Spelling Bee, a shareware Macintosh program that offers 1,500 words on four levels of expertise for students in fifth grade through college. Complete with animation, music, and a graded score sheet, the program stars Clarence the Bee, who dances when correct answers are entered. Teachers can even use the program to create personalized spelling bees.

Abrams wrote the program with the assistance of his children, Matthew, 17, and Vivi, 15, both award-winning spellers. Each is a county spelling champ, and Matthew survived four rounds in the grueling National Spelling Bee in Washington, D.C.

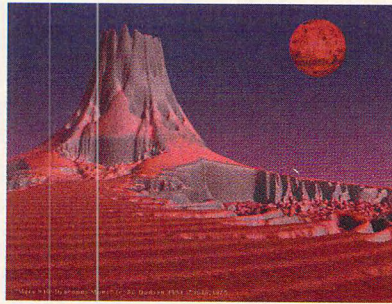
"The art of spelling is sadly in decline," says the former newspaper reporter and editor. "I see this all over the country, not only in schools but also in businesses—particularly the mass media—whose images used to depend on the accuracy of the printed word."

World Championship Spelling Bee is located in the Scripting/Hypercard Forum (GO MACHYPER), Library 3, "Education," under the file name CLAREN.SIT (157,696 bytes). The shareware fee is \$10; the full 3.8MB version is \$20. Schools can purchase site licenses for \$100.

## The Polar Caps Are Lovely This Time of Year

Visiting Mars can be tricky. High transportation costs, poor local accommodations, and limited amounts of breathable air and drinkable water hamper even the most intrepid vacationer's travel plans. But the Space Exploration Forum (GO SPACEX) offers members a way to visit the legendary red planet without ever leaving mother Earth.

Filed as MARSHO.ZIP in the forum's Library 5, "Mercury/Venus/Mars," *Slideshow: Mars—Planet of Mystery* is a freeware PC slide show by member Bob Dodson. The software provides a wide range of multimedia controls and effects, including three-dimensional fractal landscapes and sound. The presentation can be used as a



screen saver or enjoyed as an onscreen guided tour to an unusual corner of the solar system.

Dodson prefers the fanciful Mars described by Ray Bradbury, H. G. Wells, and other science-fiction authors to the barren desert-scape images relayed by recent space probes. He notes that his software reflects "an alien

place with strange and unusual landscapes and ruins. A place where howling wind sculpts the red rock into twisted monuments to the ancient dead. This is the Mars of pulp fiction and vanished races."

*Slideshow: Mars—Planet of Mystery* requires a PC with SVGA graphics and about 2MB of RAM. A sound card is recommended.

## Disney Redux

Republicans may have a staid, buttoned-down image, but over in the Republican Forum (GO REPUBLICAN), a disgruntled conservative recently whipped out her cyber-umbrella and presented a new GOP version of one of the most famous Mary Poppins songs:

**SuperFranticDemocratic-ClintonLegislation**

Is what we back when we react to Bush's vacillation

Even though we know it will annihilate our Nation.

**SuperFranticDemocratic-ClintonLegislation!**

**SuperFranticDemocratic-ClintonLegislation!**

I was blind; I swear my mind must have been on vacation!

Our fought-for rights now need last rites because they're strictly rationed

**By SuperFranticDemocratic-ClintonLegislation!**

Go Republican... or, alternatively, Go Democrat. Maybe the opposition in the Democratic Forum (GO DEMOCRATS) is reworking that old Dan Quayle hit, "I say potatoe/You say potathtoe."

## Food, Processed by PC

Most people try to eat right, but it's so easy to eat wrong. Two new shareware programs from NutriSoft, available in the Holistic Health Forum (GO HOLISTIC), can assist those who want to stay on the right, healthy track.

NutriSoft Weight Perfect 3.0 helps dieters by analyzing every morsel for fat, protein, carbohydrates, and caloric intake. The Windows-based program also provides a database of caloric expenditure, allowing credit for daily exercises and activities, from pulling garden weeds to perfecting a tennis game.

NutriSoft Reduce Cancer Risk 3.0 for Windows works much the same way, but analyzes foods for fiber content, Vitamins A and C, and beta carotenes, those nutrients or antioxidants that might help lower the risk of cancer. The National Cancer Institute recommends a diet that maintains fat intake at no more than 30 percent of calories, 20 to 30 grams of fiber

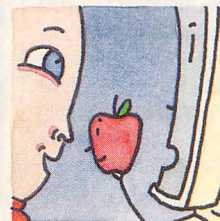
daily, vegetables and fruits, and little or no alcohol.

Both programs offer a "sort" feature that identifies foods by their composition, such as low in fat, high in Vitamin A, or high in fiber. Data is based on research by the U.S. government and several nonprofit organizations, including the American Heart Association.

"It can be quite tedious to keep track of one's diet," admits Hao Nguyen, a spokesman for the Stanford University-based NutriSoft. "The detailed printed and vivid graphic analyses bring home the point: if your diet is unhealthy, it shows with great impact."

NutriSoft Weight Perfect 3.0 is in Library 9, "Diet & Exercise," of the Holistic Health Forum under the file name NSWP30.ZIP for a shareware registration fee of \$35.

NutriSoft Reduce Cancer Risk 3.0 for Windows is in Library 3, "Nutritional Therapy," under the file name NSRCR3.ZIP for a shareware registration fee of \$39.



COURTESY OF BOB DODSON

PAUL FISCH



## Stylishly Not Showing Your Face in Public

**H**alloween revelers don't have to settle for humdrum costumes from a box or spend weeks sewing a unique design. Originality lies in the mask.

"Custom masks are a quick way to spice up any costume," says Crafts Forum (GO CRAFTS) member and mask-making expert Cat Devereaux, president of the Costumer's Guild West. She offers these tips for making your own Halloween mask in the file QKMASK.TIP in Library 12, "All Other Crafts," of the Crafts Forum.

—Purchase a domino (or half) mask in any color.

—Replace the flimsy elastic with wider elastic that will hold more securely, or remove the elastic and glue a stick to the side.



—Personalize your mask by cutting the eyes wider or adding extra height to it. Cover it in fabric or lace to complement your costume; glue into place. Don't trim the fabric around the eyes; instead, slit and fold the fabric around the holes, gluing it to the inside of the mask.

—Be creative! Trim the eyes with eyebrows or cat eyes. Add lace, beads, ribbons, rhinestones, sequins, butterflies, stars, or flowers in random patterns.

—If you're using a stick on the mask, decorate it with feathers, twisted paper, thin ribbons, or other trim that dangles about the same length as the stick.

—Finish the inside of the mask with felt or cotton fabric and glue into place.

## Hot Job of the Future: Big-Time Hackbusting

**A**s computers have taken over more and more functions in our society, data protection has become nearly as important to commercial survival as meeting the payroll and keeping the books. But until now most companies have been limited to buying antivirus and/or password-protected remote-access software and hoping for the best. Pretty soon they'll be able to call a professional hackerbuster.

According to a file in the

National Computer Security Association Forum (GO NCSA-FORUM), at least one college is in the process of designing a master's program in Interdisciplinary Technology with a concentration in Information Security. The College of Technology at Eastern Michigan University says the program may be in place as early as this year. For particulars, download EMUMSC.ZIP in Library 3, "Info Security News."

While you're in the library,

you can get more than a peek into the hacker mind-set by reading dozens of back issues of *Phrack*, the phone-phreak bible. (Browse Library 9, "Telco Security," using the keyword PHRACK, HACK, or PHREAK.) It's a trove of everything from don't-try-this-trick-at-home articles (such as "How to Make a Fake I.D.") to updates on phone phreakery in Israel, Switzerland, Quebec, and other areas around the globe.

## Internet, Tool for Translation

The Internet allows its users to exchange e-mail and gain access to a vast wealth of online information. The information superhighway now also allows users to translate their documents between several languages.

Globalink, a Fairfax, Virginia-based company, has launched the Foreign Language Message Translation System (MTS). The service allows registered users to send messages and text files on the Internet and rapidly receive draft translations of their documents from English into Spanish, French, or German, or vice versa.

To access MTS, users register by fax or e-mail using a credit card. MTS is available worldwide on a 24-hour basis. The service costs five cents per word, with a minimum charge of \$5. For added translation quality, users can request that a translation be checked against an industry-specific dictionary. MTS currently offers 18 dictionaries, including Legal, Computer, Medical, Automotive, and Business/Finance.

Globalink says its translation software is based on sophisticated algorithms that can detect a word's meaning based on its context in a full sentence. The code can also handle gender, pluralization, verb conjugation, and other grammatical structures.

"It's a convenient, cost-effective tool for users who need fast turnaround on language translations," observes Larry Golfer, director of business development. "While machine-assisted translations cannot be expected to provide 100 percent accurate results, the MTS service will provide clear, understandable, and useful draft translations."

More details are available from Globalink via the Internet. Write to [info@glink.com](mailto:info@glink.com).

## Monitor

Contributors: Cathryn Conroy, John Edwards, Lindsey Van Gelder

### WORLD UPDATE

## Scots Get 9,600 BPS; New Brit TV, Radio Listings

**G**lasgow, Scotland, is the latest city in the United Kingdom where members can access CompuServe at 9,600 bps. Communication surcharges are the same as for CompuServe's other European nodes: \$0/hour during non-prime time (weekdays from 7 P.M. to 8 A.M. and all day on the weekend) and \$7.70/hour prime time (all other times). The access number for the Glasgow node is 041 840 4494 (it is not necessary to dial the 041 city code if calling in Glasgow). For more log-on information, GO LOGON, or contact the U.K. Customer Service freephone at 0800 289 458 (Monday through Friday 9 A.M. to 9 P.M. and Saturday 10 A.M. to 5 P.M.).



Complete listings for British television and radio programs are available from PA News Online (GO PAO). The listings, which are part of basic services, cover both satellite and

terrestrial U.K. channels, plus U.K. radio stations, and are available a few days prior to and after the programs air. Listings for channels such as BBC1 and BBC2 contain regional variations where appropriate, and all ITV regions are listed in their own section.



The German-language Vobis AG Computer Forum Online (GO VOBIS) is now available for discussion of Vobis Highscreen computers. The forum's sections include Grafikkarten, Drucker, Monitor, Software, Rechner, Scanner, and Multimedia. The Vobis support staff monitors the message sections to answer questions and provides product information and printer, graphic, and CD-ROM drivers in the forum's libraries.



## Behind the Screens

with John Edwards



### What Say You, Ticker Master?

My three favorite places on CompuServe? Why, GO OLT-130, GO FISHNET, and GO QQUOTES, of course.

But I must admit that QQUOTES is my favorite place by far. After all, I've read at least half the stuff in OLT-130 and can carry on a merry banter about flounders for only a

limited time before beginning to suffer from fin rot. But as the result of a childhood accident that involved a Hopalong Cassidy autographed brick and a copy of *The Wall Street Journal*, I'm fascinated by stock ticker symbols. I'm especially intrigued by the symbols employed by the various companies involved in this wacky, hell-bent-for-global-domination electronic-information industry.

IBM, for example, uses the symbol IBM. Crazy, huh? That's just the sort of wit and ingenuity one would expect from the company that gave us John Akers and the amazing TopView. Microsoft uses MSFT, which sort of sounds like the noise I make when I roll over on my belly. MSFT also sounds like the letters once used by Lucky Strike cigarettes, but the last time I mentioned LSMFT I was swamped with e-mail (at least three messages) from the X Generation asking me what the

acronym meant. (Here's the answer: Lucky Strike Means Fine Tobacco.)

Lotus Development is the proud owner of LOTS, which makes me think that the company might be moving into real estate if its latest version of Notes doesn't pan out. If I were an investor, I'd keep a sharp eye on the Boston-area classifieds.

Some companies have selected genuinely clever symbols, strangely enough. Image Entertainment has DISK, CompUSA has CPU, Go Video has VCR, Alliance Imaging has SCAN, and Alliance Entertainment has CDS (as in the abbreviation for compact discs). Lasers are currently burning a hole in QQUOTES. There's LASR (Laser Precision Corp.), LASE (Lasersight), LSER (Laser Corp.), and LSR (Laser Technology).

But some symbols simply cause me to scratch my head. One would think that BUS rep-

resents some company involved in computer-architecture development, but it's being ridden by Greyhound. LOG, which one might associate with logging onto a computer system, is used by Rayonier Timberlands. BOOT is the property of LaCrosse Footwear. FAX is used by the FST Australia Prime Income Fund (why?).

I'm surprised by some of the symbols—including BYTE, FONT, and DOS—that haven't yet been snapped up by an image-conscious computer company. What's the problem?

But I'm a man who likes simplicity. Perhaps that's why I admire AT&T and its neat and elegant T (for "telephone," of course). On the other hand, there's something to be said for Helionetics' eye-catching ZAP.

For more BTS gems by John Edwards, GO OLT-130. Edwards is a contributing editor of CompuServe Magazine. His CompuServe User ID number is 70007.412.

### Travel Forum's Poll Results

Before you hop on a plane for your next business trip or vacation, take a look at the results of the Travel Forum's (GO TRAVSIG) First Annual Cyberspace Travel Poll, in which 60,000 forum members from more than 70 countries were asked to choose their favorite travel products and destinations.

Favorite U.S. Airline—Delta

Favorite Non-U.S. Airline—British Air

Most Mediocre Airline—Continental

Favorite Frequent-Flyer Program—American Airlines

Favorite U.S. Airport—Atlanta Hartsfield

Favorite Non-U.S. Airport—Amsterdam Schipol

Favorite Computer for Traveling—Apple Macintosh PowerBook

Favorite U.S. Hotel Chain—Marriott

Favorite Travel-Book Publisher—Fodor's

Favorite Travel Magazine—Condé Nast's *Traveler*

Favorite Credit Card for Traveling—American Express

Favorite Cruise-Ship Line—Royal Caribbean

Favorite Train—Trains in Switzerland

Favorite Car-Rental Company—Hertz

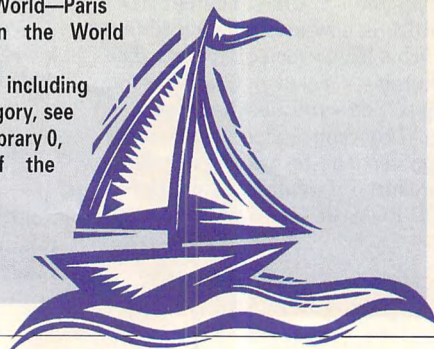
Favorite City in the U.S. and Canada—San Francisco

Favorite City in the World—Paris

Favorite Country in the World

—United States

To learn more, including runners-up in each category, see the file TRAVSI.POL in Library 0, "General Interest," of the Travel Forum.



### Docu-Drama: Learning Software

You've read all the product reviews, shopped carefully, and now own a brand-new word processor, database, or other type of business-productivity software package. So how do you get up to speed on your new acquisition without sacrificing the productivity the software was supposed to provide?

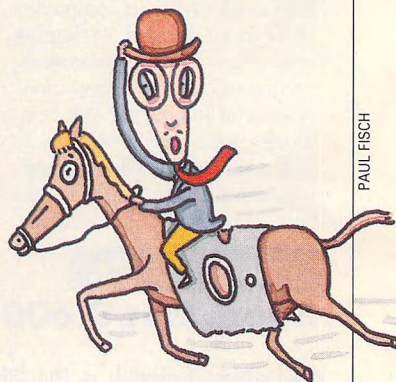
Mary Deaton, a professional software-documentation writer and trainer who regularly visits the Computer Training Forum (GO DPTRAIN), has divided the software learning process into four easy-to-follow steps:

1. Casually play with the product and explore its various features.

2. Use the program's Help feature to find introductory or overview topics.

3. If there's a tutorial, run it to get a feel of its depth and to assess the software's "big picture." "What I'm usually looking for is the topic or topics that explain the primary window and its elements: tool bar, palettes, and so on," says Deaton.

4. Use the software to per-



PAUL FISCH

form a specific task. "My frustration level is about three tries before I go looking for information," says Deaton. "If I can't find the answer within three passes through the documents, I'm likely to call product support to find out if it's crucial. If it isn't crucial, I may go on to try something else and come back later to the thing that stumped me."

Deaton notes that most software novices prefer a sequential, linear learning path. But she adds, "I also know that lots of computer-literate people have given up on docs and muddle through as I do."



# FROM ADOBE TO ZEOS, ALL YOU NEED TO KNOW BEFORE YOU BUY.



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CompuServe® members: Now when you're in the market for computer products, you can find the information you need with Computer Library Online. It's a trio of databases that puts a wealth of information on your desktop — articles, reviews, product specs and prices, plus technical support information about your hardware/software products.

### Identify the products you need.

Make your buying decisions easier with *Computer Buyers' Guide*, a directory of over 75,000 computer products, from printers to word processors and spreadsheets, plus much more. It shows you the manufacturers' options, complete product specs, and company contact information for all products, and pricing from mail order and direct merchants.

### Tap into what the experts say.

*Computer Database Plus* gives you instant access to over 350,000 computer-related articles from more than 200 major trade, professional and business magazines including *PC Magazine*, *PC Computing*, *Infoworld*, *PC Week* and more. You can even download articles including product reviews onto your PC. New items are added weekly to keep you up-to-date on latest developments.

### Online support, too.

After buying your software, you can turn to the *Support on Site (SOS)* reference library for answers to your questions 24 hours a day. SOS is a comprehensive source of technical support information on 120 products from leading software companies, all organized in one quick search-and-retrieve program.

### Computer Library Online is a must for all computer buyers.

And it's simple to access — just type GO COMPLIB from anywhere in CompuServe. Computer Library Online should be your first stop for all computer buying information. First time users: try *Computer Database Plus* in October, and enjoy a \$5 usage credit.

**First-time users:  
Get a \$5 credit!  
Just try Computer  
Database Plus.**

**Check out Computer Library Online today!  
TYPE GO COMPLIB.**

**COMPUTER  
LIBRARY  
ONLINE**

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GO OLI for more information.



## FEATURE

### Where to GO

CompuServe Mail  
**GO MAIL**

CompuServe Software  
**GO CISSOFT**

Computer Buyers' Guide  
**GO COMPBG**

Computer Database Plus  
**GO COMPDB**

European Community  
Telework Forum  
**GO ECTF**

HP OmniBook Forum  
**GO HPOMNIBOOK**

IBM Communications  
Forum  
**GO IBMCOM**

Macintosh Hardware  
Forum  
**GO MACHW**

Newton Developers  
Forum  
**GO NEWTDEV**

Newton/PIE Forum  
**GO NEWTON**

Palmtop Forum  
**GO PALMTOP**

Palmtop B Forum  
**GO PALMB**

Pen Technology Forum  
**GO PENFORUM**

Toshiba Forum  
**GO TOSHIBA**

Travel Forum  
**GO TRAVSIG**

ZiffNet's Buying Advice  
**GO BUYADVICE**

# No-Office Computing

**From laptops to palmtops,  
tiny tech allows more people  
to make any old place  
their workplace.**

**M**obile computers are changing the way people work. Whether it's snazzy personal digital assistants that slip into jacket pockets or compact notebook computers that perform like desktop machines, these computers on-the-go provide all that's needed to take care of business anytime, anywhere.

"The office is no longer the center of the workplace. The office of today is wherever the individual goes," says Marty Mankins, president of Perfection Applied, publisher of the mobile-computing magazine *Portability* and the newsletter *Take It With You*.

Because professionals can no longer depend on business coming to their office doors, the central company office isn't as important as in days past. "You must go to where the business is, and you need to be prepared with your portable office to grab whatever information you need," says Mankins, also an assistant sysop in the Palmtop, Palmtop B, Pen Technology, Newton/PIE, and Newton Developers forums.

Chris Hosford, executive vice president of the Los Angeles, California-based public-relations firm the Spindler Organization, finds his mobile computer an indispensable tool. Before a recent breakfast meeting with a client, automobile

manufacturer Hyundai, Hosford logged onto the Executive News Service in his hotel room and downloaded breaking news stories about the company. In the meeting, Hosford turned on his Hewlett-Packard OmniBook 300, a three-pound subnotebook computer with a nine-inch screen, and showed his client a news story that forecasted a potential problem for the automaker. He then scanned that day's *New York Times*, *Wall Street Journal*, and *USA Today*, but the story didn't appear in any of them.

Thanks to ENS, his client was prepared for a reporter's probing question a few hours later on that very topic. "Because my client had a chance at breakfast to read the story and think about it, he was able to give a better answer to the question," says Hosford.

His OmniBook not only allows him to stay informed about his clients, but also helps them view him as technically savvy and able to work proactively, rather than reactively—a must in public relations. Hosford chose the OmniBook because it is lighter and smaller than notebooks, but unlike many subnotebooks, it offers a full-size

*Cathryn Conroy, senior writer of CompuServe Magazine, bought her first mobile computer in 1983. Her CompuServe User ID number is 70007.417.*

MELISSA GRIMES







keyboard, a critical feature for him because he uses it primarily for writing.

In addition, it makes his frequent airplane trips more efficient. He bills by the hour, so the unbillable travel time on his average of 70 flights a year used to represent "a lot of downtime which

I wanted to make productive," says Hosford. Buying the OmniBook, and joining the HP OmniBook Forum, solved the problem. Using the subnotebook on the plane, with its five hours of battery life, he is able to write reports, jot notes on meetings, fine-tune presentations, and write letters. Upon landing, he sends the results of his labors back to the office as a CompuServe Mail message or uses CompuServe Mail's fax feature to send himself a printed copy at his hotel.

Hosford admits many public-relations and advertising agencies haven't realized the power of mobile technology, making the

Spindler Organization more competitive. "With my OmniBook, they see me as part of the future. It's a small demonstration, but an important one. If we couldn't work like this,

we wouldn't have the business we do," he asserts.

Michael A. Banks, author of *Portable Power* (Brady,

1992), agrees that the mobile office brings a new level of efficiency to work that involves data acquisition and reporting. "Those who work in the field or for a large organization can accumulate and share data faster and with more ease than if using traditional methods, such as hard-copy reports, face-to-face meetings, and long-distance telephone calls," he explains.

Computer manufacturers have been quick to catch on to the new trends. *Computer Reseller News* recently projected the worldwide mobile-computing market will reach \$69.6 billion by 1999, preceded by

annual sales increases at a compound rate of 36.7 percent throughout the '90s.

If Paul Frye, vice president of marketing for MCB Realty Services Inc. and a real-estate agent in Escondido, California, were to sit at a desk all day, he wouldn't be doing his job. Instead, he spends most days in the field showing properties to clients. He takes along his 33 MHz Apple PowerBook 165 with 14MB of RAM and a PowerPort/Mercury modem from Global Village Communications Inc. to access the San Diego Association of Realtors' Multiple Listings Service database maintained on a VAX. Instead of printing out the MLS data on reams of paper, Frye downloads the listings to his PowerBook so that he can search for specific features while on the road.

Frye has learned over the years that home buyers don't always know what they want. One client specifically stated the features he desired in a house, but when he

## FEATURE

# Top 10 Tips for Road Warriors

For Jim Alexander, it wasn't one of his better days as a traveling instructor for a software company. His hotel room lacked a modular RJ-11 jack for his laptop modem, so he got out a screwdriver and tried to remove the telephone wall plate. No luck there, so he called the hotel desk and had his room changed.

Two rooms later, "I still couldn't get out through the phone system to get my e-mail. The resolution was moving to another hotel. I wasted about four hours just because I forgot to ask up front about the phone system," he recalls.

E-mail connectivity and other working conditions for computing "road warriors" are improving, but pitfalls such as Alexander's still occur and call for careful trip planning.

The good news is that 92 percent of chain-owned hotel rooms around the world are modem-ready, says Elliott Masie, a telecommunications consultant. Modem-ready means the rooms have either a data port installed in the phone or an accessible RJ-11 phone-jack outlet in the wall.

The downside, says Masie, is that "your ma-and-pa motels built before 1990 are less likely to have those facilities."

Hotel and other travel planning should begin before you leave home, say veteran CompuServe travelers, who exchange "war stories" on travel-related and computer forums. Here are their top 10 tips:

- ▶ Before your trip, GO PHONES to learn the CompuServe access number for the city where you'll be staying. This can be a time and money saver later on.
- ▶ When you make your hotel reservation, request a modem-ready room. Using a major hotel chain improves your chances.
- ▶ Check your mobile computer's power adapter. Make sure it can accommodate 110/120 and 220/240 voltages and line frequency of 50/60 Hz. Different voltages are found in different countries, and virtually all late-model PCs are equipped to handle them.
- ▶ When traveling abroad, carry a power-adaptor plug that fits wall outlets in the country you're visiting. An assortment of wall plugs for most countries is readily available in stores.
- ▶ Carry extension cords to make sure you can use your mobile PC comfortably in your hotel room. This includes an extension power cord, an extension phone line, and extra in-line and duplex phone jacks to let you work several feet from your bedside phone.
- ▶ Carry a "connectivity kit" if you think your hotel room won't be modem-ready: a screwdriver to remove wall plates, a pocket knife to strip insulation from phone wires, an acoustic coupler to attach to your phone, alligator clips to attach your modem to phone wires, and a line tester to locate live phone wires.
- ▶ Make sure your laptop is fully charged when you get to the airport. Security inspectors might ask you to turn it on to verify it's a working computer.
- ▶ If you carry a dazzling new laptop or notebook PC, don't make it a tempting target for thieves. Disguise it in a plain but sturdy briefcase or bag.
- ▶ For emergency printing, use your hotel fax machine. Send the hotel a fax from your room with CompuServe Mail. Pick it up minutes later.
- ▶ Use CompuServe Mail to send a fax back to your home office; it's cheaper than your hotel's fax charge, which will include any long-distance toll charges.

These tips apply to virtually all countries using computers. For information about conditions in a specific country, post a message in the Travel Forum or in a communications forum that supports your brand of computer—for example, the Palmtop, Macintosh Hardware, IBM Communications, and similar forums.

Also, CompuServe forums contain help files for computing travelers. One is LAPTOP.ARC, written by veteran airline pilot John Deakin. It has instructions on how to use connectivity kits and is available in the Toshiba Forum's Library 4, "Text Files." Another file, TBBSLI.&BK, in Library 0, "General Interest," in the Travel Forum, summarizes the book *The Electronic Traveler*, by Marcus Endicott.

—Michael Naver



## CompuServe, PDA-Style

actually read the listings of houses that fit these criteria, he changed his mind. Because Frye had downloaded many other listings from the MLS, he was able to zero in on the new features the client decided were more important.

"If we're touring homes and a new or unforeseen need arises, I can immediately access the overall data I have downloaded to the PowerBook and do a simple 'Find' with Microsoft Word to locate a new property," he says. "Not only do I not have to print a lot of paper, but I also have an immediate answer to the client's needs."

Also loaded into the PowerBook is mortgage-analysis information, including a financial prequalification template Frye designed in Microsoft Excel. "Clients often ask 'What if?' questions regarding their needs," he says. Using this template, he enters such factors as interest rate, property price, taxes, income, and other variables to immediately tell clients if they will qualify for financing. Printed copies are provided to the clients using Apple's battery-powered Portable StyleWriter inkjet printer, which weighs just four and a half pounds and produces 60 pages from a single charge.

"This gives clients specific and rapid answers to their questions. While these can also be provided with a calculator, the ability to print out data and hand it to the client can be very helpful," says Frye.

His mobile office, all of which fits in a briefcase, is the hub of his business. "The main office is mainly a support center—a place to meet with clients, make communications, and obtain forms and other office support. Most of my actual dollar-making work is performed outside the office, either at clients' homes or showing property."

This ability to use mobile computers to electronically link to office-based desktop PCs, local-area networks, and mainframe computers is critical to the success of a mobile office in any industry. Workers can instantly research corporate databases, transfer information, and catch up on company news no matter where they are or what time it is. This link is more than electronic; it connects people to people, shrinking distances and making work in the field more efficient. More than any other form of long-distance communication, it provides access.

Without mobile technology and electronic communications, Horace Mitchell of Berkshire, United Kingdom, says he might not have a business. One of the companies he runs, Management Technology Associates, is "virtual." A consortium of several firms and individuals, formed almost a year ago as the result of a telework/teletrade study he conducted for the U.K. government, it develops open electronic networking in Europe to en-

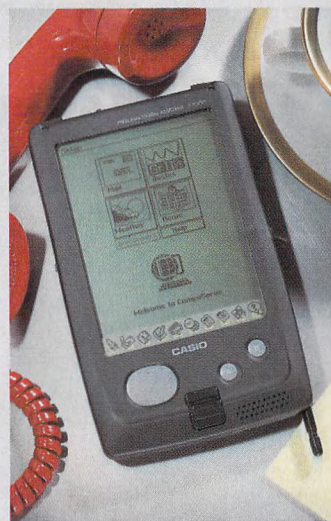
While personal digital assistants are primarily used as electronic calendars and mailing lists, they are capable of many additional functions, including online communications. CompuServe is developing new interfaces for these tiny mobile computers that allow easy and efficient access to selected parts of the Information Service.

CompuServe for GEOS is designed for PDAs using the GEOS operating system from Geoworks, such as the Sharp PT-9000 and Casio Z-7000. With a touch of the screen, users can access the Executive News Service, stock quotes, weather, and CompuServe Mail in the native GEOS environment. CompuServe for GEOS can be downloaded from CompuServe Software for \$10, which is offset by a \$10 CompuServe usage credit that is applied to your account. There is no hourly rate charged during the download.

CompuServe is also developing a software interface that will allow users of various Magic Cap devices, including Motorola's Envoy, to access CompuServe Mail, news, stock quotes and other financial information, travel services, and weather. The Magic Cap platform was developed by General Magic, a consortium created in 1990 that includes such industry heavyweights as Apple, AT&T, France Telecom, Fujitsu, Matsushita, Motorola, Philips, Nippon Telephone and Telegraph, Sony, and Toshiba.

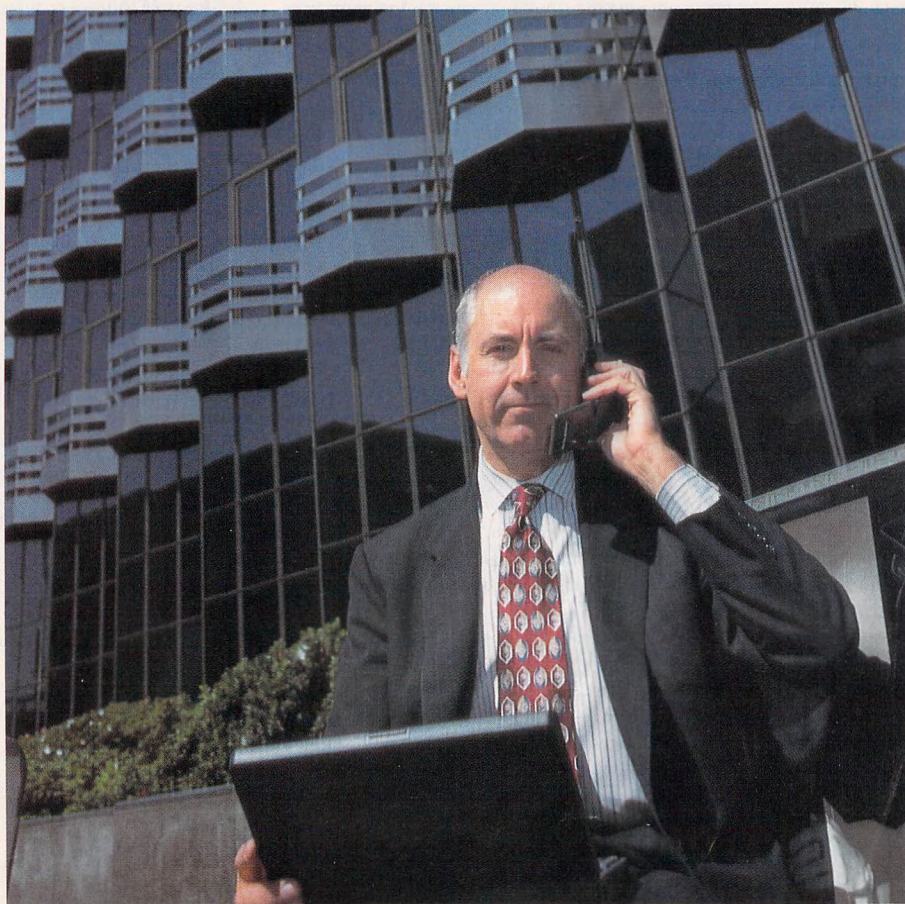
Debuting this fall is Microsoft Corp.'s WinPad, an operating system for a number of PDAs to be introduced by Compaq, Toshiba, Sharp, Zenith, and others. CompuServe is developing an interface to provide Information Service access from PDAs using WinPad.

—CC



PDA software allows CIS access

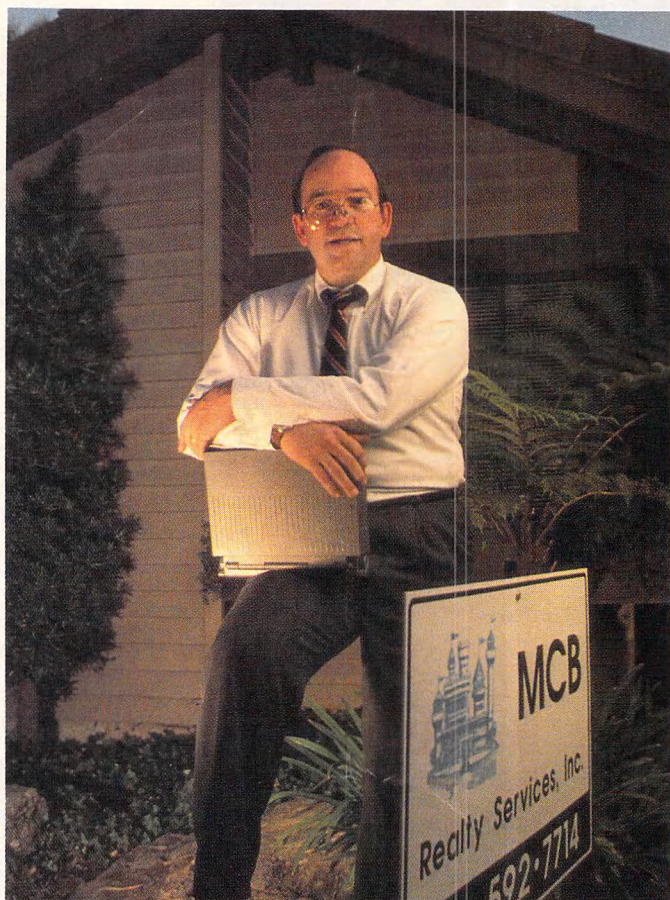
TOM HOGAN



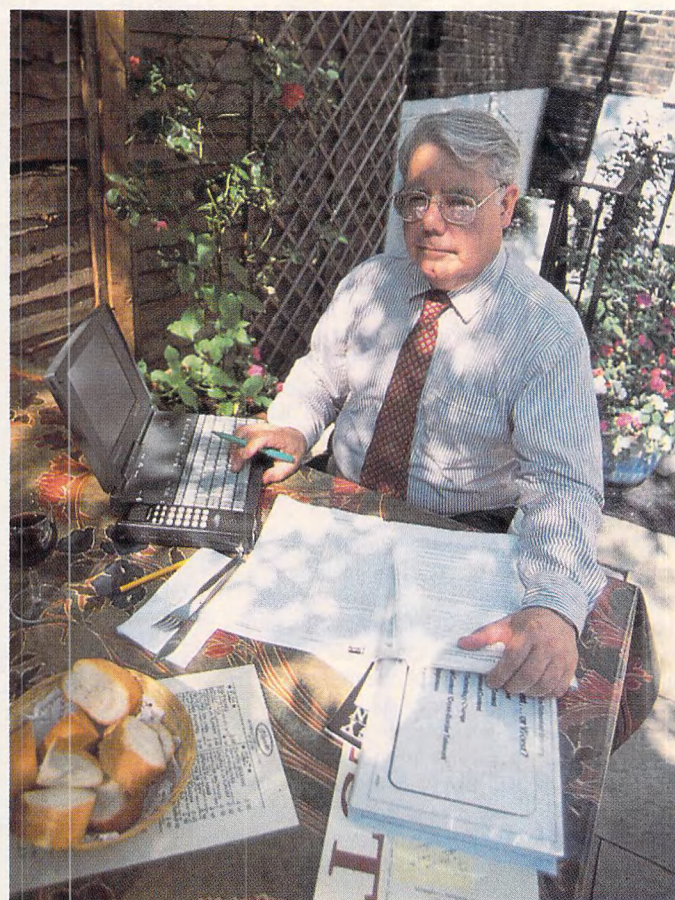
DAVID SESSIONS

Taps into late-breaking client-related news online while traveling with OmniBook 300: Hosford





Uses PowerBook to find home buyers good matches on the spot: Frye



Runs MTA with cellular phone, e-mail, and PowerLite '386: Mitchell

courage companies and governments to communicate via computer, and will soon spawn conventional companies to carry out specific projects. The glue that adheres the virtual enterprise is CompuServe Mail, the only form of communication the consortium members use. Mitchell, as its chief, relies on mobile technology to get the work done.

"Without the technology, there would be no MTA, and my other commitments would take up more time and be handled less effectively," says Mitchell, also director of Anders Electronics plc, a company that sells panel instruments and liquid-crystal displays, as well as of Brameur Ltd., a research-based consulting firm specializing in information technology and telecommunications. "I am seldom at the main office for more than a few hours during the workweek. Networking through CompuServe Mail gives me and my colleagues better communications in less time at a lower cost," he explains.

Mitchell, founder of the European Community Telework Forum, uses an IBM-compatible MJN Technology PowerLite '386 notebook with a 120MB hard disk and 8MB of memory that allows him to run Windows with multitasking. A Hayes Optima 96 modem, portable telephone, British Telecom charge card, voice mail, fax service, and CompuServe Mail complete his mobile office.

With corporate offices at Anders and Brameur, a home office, and offices at many of his clients' sites, Mitchell says his notebook computer allows him to keep in touch while constantly on the move. This involves circulating updates about the company's activities so all the participants can feel they are part of the action even when

they aren't. For instance, when interviewed by BBC radio for a program on telework, he notified the MTA partners via CompuServe Mail, a task that would not have been feasible by phone or fax. "This meant they were all able to use the public-relations value of a very positive mention of MTA," he explains.

The group also uses CompuServe Mail to keep in touch with a network of worldwide contacts in Europe, the United States, Australia, and the Far East. "This contact base allows us to take the temperature of the market in other countries and often be ahead of the mainstream market news," Mitchell says.

Calling himself a "road warrior," Mitchell spends little time during regular business hours pinned to a desk in a single location. "My ability to work anywhere, particularly to communicate anyplace, anytime, must at least double my productivity," he says. Moreover, it allows the companies he's affiliated with to function at full speed. "The truth is, we couldn't do the range of things we do

without these facilities."

Another key to on-the-go productivity is organization, which can be enhanced by the new breed of palmtop computers and personal digital assistants. While the tiny computers can't handle large written documents easily, they're optimal for maintaining lists with numerous entries, such as addresses, phone numbers, daily to-do agendas, and calendars.

"I am not a very organized person," confesses the Reverend Bryan Siverly, pastor of the 250-member First United Methodist Church of Waverly, Illinois. Siverly's congregation might disagree, but they've known him since he bought his Psion Series 3a palmtop.

This British-made, pocket-size computer with 512K internal RAM, high-resolution LCD screen, and two disk drives for solid-state memory operates for 50 to 60 hours on two AA batteries. Inside Siverly's model are the very workings of his central-Illinois church.

Using the Psion's "Agenda" function, Siverly keeps not only his personal calendar but also the church's calendar of events. Administrative council meetings on the second Wednesday of the month, entered once, automatically appear each month from then on. Siverly can also make changes easily. When the handbell choir switched practice nights, he noted it and the Psion changed

## FEATURE



# A Weighty Subject: Which Kind of Portable?

Mobile computers come in many shapes and sizes, some as light as a pound that do little more than serve as an electronic calendar and address book, while others weigh in at a relatively hefty six or seven pounds but carry all the power of a desktop PC.

Before purchasing a mobile computer, consider how you will use it. If it's primarily for data entry—word processing, database management, or spreadsheets—you'll need a notebook or subnotebook with a good keyboard, and strong arms to carry it around. If most of your work is retrieving information, go with a palmtop or personal

digital assistant that slips into your pocket.

To determine what type of computer to buy, consider this advice from Ron Luks and Marty Mankins, sysops of the Palmtop, Palmtop B, Pen Technology, Newton/PIE, and Newton Developers forums; and Blake Howell, a systems engineer with Megahertz Corp.

For buying advice on all types of mobile computers, consult Computer Buyers' Guide, Computer Database Plus, and ZiffNet's Buying Advice, or type FIND and the manufacturer's name. For example, type FIND GATEWAY or FIND TOSHIBA to locate specific forums.

## Notebook Computer

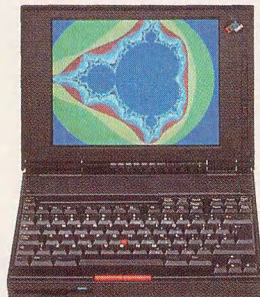
Weighing five to seven pounds and with an average size of 14" x 10" x 2", a notebook computer has virtually all the power of a desktop PC with as much as a 500MB hard drive, an internal floppy-disk drive, and external keyboard ports. Look for the same features you would in a desktop, focusing especially on the keyboard and screen. Of all types of mobile computers, this is the best for entering data because the keyboard is full-size. A color screen is ideal, and an active matrix screen is vastly superior to any other type. Make sure the pointing device, be it a mouse, button, or pen, is comfortable to use. Check on battery life—look for a computer whose battery has at least three to four hours of charge. Buy as much hard-drive space and speed as you can afford. There are some 600 types of IBM-compatible and Apple notebook computers currently on the market.



Apple PowerBook 540c

## Subnotebook Computer

Subnotebooks are scaled-down notebooks and are much lighter, at three to four pounds, typically offering a smaller keyboard in exchange for being easier to carry. Because of the reduced size, some subnotebooks don't offer a built-in disk drive or provide it as a separate unit. They usually feature battery life of about five hours, fast '386 or '486 processors, built-in pointing devices, and full-size ports. Subnotebook computers include such models as the Altima Traveler, Aspen Color Subnote, Gateway HandBook, Hewlett-Packard OmniBook, IBM ThinkPad, Toshiba Portege, and ZDS Z-Lite.



IBM ThinkPad 755c



HP OmniBook 530

## Palmtop Computer

As the name implies, these one-pound computers are no larger than a VHS-size videocassette and fit in the palm of your hand. Intended for handheld use, they feature a miniature keyboard that may be difficult for touch typing. They operate on alkaline batteries, so battery life is measured in days or weeks, not hours. They have limited storage space, and you may be able to use only the pre-installed software. Remember, the smaller the machine, the less useful it is for data entry, so palmtop computers are primarily used for data retrieval. They are ideal as calendars, schedulers, and mailing lists. Casio B.O.S.S., Hewlett-Packard's HP 100LX, the Psion Series 3a, and the Sharp Wizard are examples of palmtop computers.



Psion Series 3a



Casio B.O.S.S.

## Personal Digital Assistant

Also known as PDAs, these hot, new one-pound computers are no larger than a paperback book and are shaking up the mobile-computing market. The term "PDA" is confusing in that it is often used to describe any handheld computer; however, PDA generally refers to *pen-based* handheld computers. The pen or wand is used as an input device, much like a mouse. Touch the pen to the screen just as you would click a mouse. Some PDAs feature handwriting recognition. PDAs currently on the market include the Apple Newton MessagePad, the AT&T EO 440, the Casio Z-7000, the Sharp PT-9000, the Tandy Z-550, and the new Motorola Envoy.



Apple Newton MessagePad 110



Casio Z-7000



# Big-Business Card: PCMCIA Plugs Into the Future

It's a small card, about the size of a credit card, but with a big name and, industry experts say, a big future in mobile computing. That's the long and short of the Personal Computer Memory Card International Association, or PCMCIA, card.

PCMCIA cards slip into slots in your notebook, laptop, or palmtop computer. They're used for extra memory storage (called flash memory) or as small modems, SCSI adapters, software packs, or LAN adapters. Some of the newest PCMCIA cards are used as miniature hard-disk drives, complete with a moving arm and platter.

Because of their size, their ability to retain memory when not in use, and their low power requirements, the cards are considered by industry experts as critical to the future of mobile computing. They also have a future in the "green PC" movement toward energy-efficient desktop computers.

"Just about every handheld and notebook computer recently announced has PCMCIA slots," reports Steve Magidson, media spokesman for PCMCIA, the trade association that sets standards for the card. PCMCIA slots are found in Apple's new PowerBooks and Newtons, IBM's ThinkPad, and Hewlett-Packard's OmniBook. The research firm Dataquest reports that 86 percent of mobile PCs shipped in 1994 have one or more PCMCIA slots.

What can you do with PCMCIA cards? Chris Sawford, an independent financial planner from Wales, United Kingdom, never leaves home without his Zeos palmtop and two PCMCIA cards. "The greatest thing about the Zeos is that it runs off two AA cells and has MS-DOS, Microsoft Works, and some other programs built in," he reports. "As a British rail commuter, I find the Zeos is just fine for a quick note on the way to work. As an aspiring glider pilot, I confess that when I'm not working, I sometimes use Flight Simulator for fun. I have two 2MB PCMCIA cards in the machine which hold all my software and data."

Sawford is a member of the Palmtop

Forum, and his experience with PCMCIA cards comes as no surprise to Ron Luks, manager of the Palmtop and other mobile-computer forums. The PCMCIA card, Luks says flatly, "is one of the greatest things that's happened to mobile computing and is definitely a wave of the future."

Besides their other advantages, PCMCIA cards can be "hot swapped" in and out of your mobile computer. "Your computer is up and running and you plug in a card," Luks explains. "You might want to change cards from a modem to software and you don't want to reboot every time." The cards retain their memory when out of the machine.

Some cards act as mobile pagers, Luks says. "You walk around with the pager card in your pocket, and if you have a button battery on it, you get paged. Then you plug in the pager card to your palmtop to bring in the message."

The cards are durable, too, and well suited to rough use in the field. "You can drop them on the ground and then put them into your computer," says Luks.

Several hundred vendors are now making the cards, and prices are dropping. Still,

you'll pay a premium. A modem or LAN adapter card might cost about \$250, or twice the standard price. A 2MB memory card costs about \$125, compared with less than a dollar for a standard diskette.

What about compatibility between the cards and your mobile PC? Before buying a card, Magidson advises, check with the card maker and the laptop maker to be sure they will work together. Also, verify you have the proper version of the card software.

Capabilities of PCMCIA cards are growing fast. Magidson says flash-memory cards can now hold 40MB of data and soon will hold 80MB. Rotating-drive cards will have capacities reaching 300MB, he notes. With PCMCIA cards, it seems smaller means bigger and better.

—MN



PCMCIA becoming standard: Magidson

DAVID SESSIONS

every other entry. When the computer incorporated the update in seconds, Siverly says, "I knew I was in love." He immediately joined the Palmtop Forum and became an active member of Section 7, "Psion Inc."

He uses the palmtop's alarm, which he programmed to sound like a church bell, to remind him of appointments and meetings. A trumpet sounding "Charge!" reminds him to submit the church's weekly newspaper ad on deadline.

With Agenda's anniversary feature, he is able to remember birthdays and anniversaries of everyone in the congregation. He also records deaths, and on the anniversary of each he calls the family. "People appreciate that a pastor remembers otherwise obscure dates that are very important to them," he says. Prayer requests from the congregation are also tracked on the Psion, allowing Siverly to include them in Sunday worship, Bible-study times, and personal prayer sessions.

Siverly even writes sermon outlines on the Psion. Because it is always with him, he can jot down ideas whenever inspired, which has happened while sitting in parks, on car trips, and during a rodeo. The church mailing list and budget are also stored on his palmtop for quick access and easy updates.

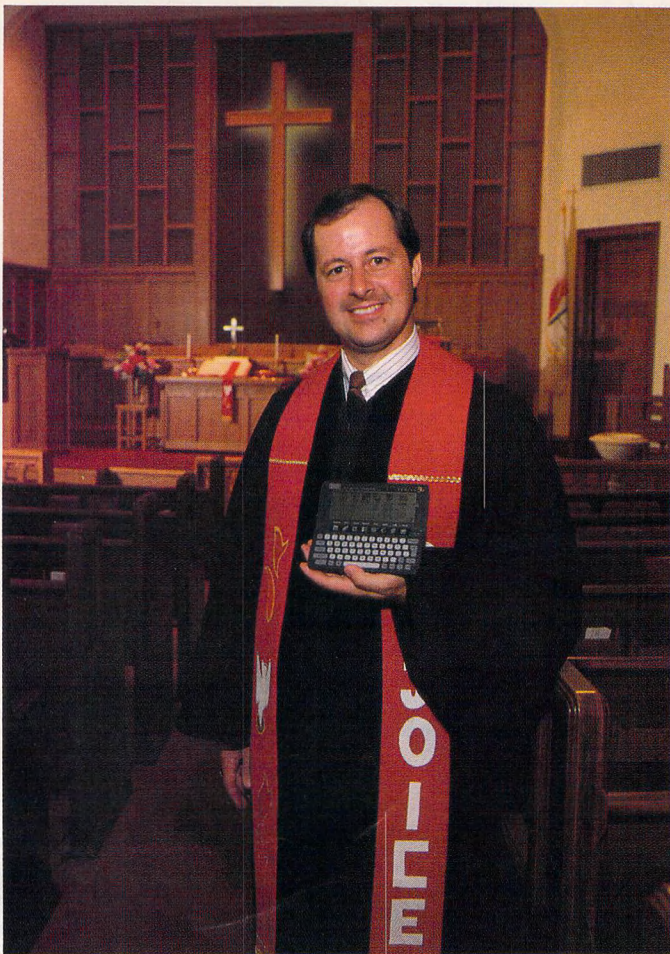
"I have an impossibly complicated schedule and a vast number of details and lives to keep track of. I went through years of making excuses or pretending I remembered something when I didn't. You can't imagine what that did to my integrity," he says.

He admits some congregation members were initially dismayed by this pastor with a computer in his pocket, but they're accustomed to it now. "The bottom line is they know they have a pastor who is thorough and on top of things," explains Siverly. Calling the Psion an extension of his office, he is able to spend less time at his desktop PC and more time visiting members of the congregation.

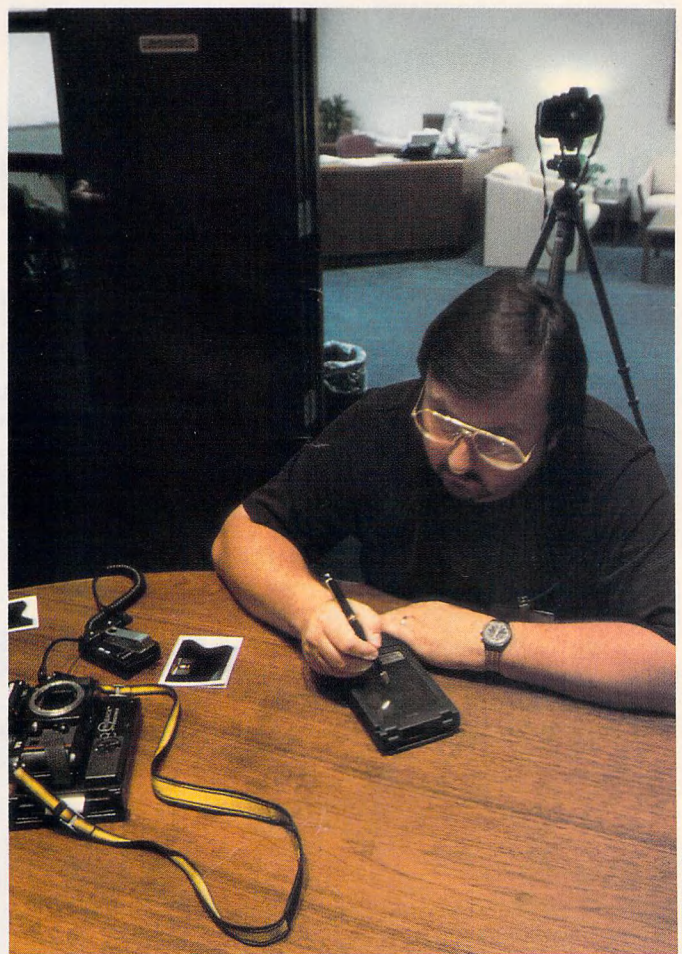
Mobile computers allow professionals to be more productive and better organized, but can they enhance creativity? Yes, many would say, because ideas can be easily and quickly captured as they occur.

Freelance photographer Ted Anderson of Allentown, Pennsylvania, has no doubt his Apple Newton MessagePad 110, with a 2MB RAM card and handwriting recognition, has added to his creative energy and given a new dimension to the photos he shoots for the annual reports and brochures of several major high-tech companies, including AT&T,





Pastor's palmtop keeps church budget, calendar, sermon notes: Siverly



MessagePad enhances freelancer's photo-shoot ideas: Anderson

IBM, and Unisys.

These big-budget photo shoots often involve many people, including professional models who demand top dollar for a day's work and high-level executives with little time to spend before a camera. Being organized is more than making sure the details are in place—the models arrive on time, the props are available, and the cameras all have film. It also means having the creative idea for the photograph before Anderson arrives on the scene.

To do this, he visits photo sites several days prior to a shoot to choose the best backgrounds, place people in the most favorable locations, and anticipate problems. He uses a stylus to draw thumbnail sketches of potential photo scenes on his Newton. "I envision how I will produce the image. This isn't fine art I'm creating in these sketches on the Newton, but it tells me what I want to do with the image when I return and take the photograph," he says.

Anderson used to draw thumbnail sketches on paper, but now prefers the Newton because edges never fray and sketches aren't misplaced. "It frees me creatively because I have the information right there," he explains, noting the pocket-size PDA is also easier to carry than a sketch pad, an important consideration when he hauls 14 cases of photographic equipment to each

location.

Recently hired to shoot photographs for Keystone Financial's annual report, Anderson had to include a shot of one of its clients, the Yuengling brewery. The oldest U.S. brewery, it still uses old-fashioned methods to make its beer. Before he took the brewmaster's photo—a task he had to complete in just one hour—he

toured the brewery, making sketches of different background sites and taking notes

on how he could set up his electronic equipment in locations drenched with beer and water. On the day of the shoot, Anderson was prepared and produced an impressive photograph that pleased both the brewmaster and Keystone Financial.

"When photographers mess around trying to figure out what to do, they lose the person's interest. When I know what I am doing, I can keep the subjects 'alive' and get a good shot," he says.

Although bashed in the press, Newton's handwriting-recognition feature is one of Anderson's favorites. The Newton recognizes about 90 percent of what he writes. He uses SNAP, a custom stylus manufactured by WriteWare, which he thinks is superior to the Newton's stylus. Selling for \$8.95, SNAP can be inserted into most standard fountain pens, including those by Mont Blanc, Cross, Parker, and Fisher; its plastic-tipped stylus

replaces the pen ink cartridge. "SNAP's stylus is a real pen design, which is better for writing and helps with the recognition," Anderson explains. "Besides, the act of writing on the Newton forces me to write better and think more clearly. It helps me organize my thoughts."

A member of the Newton/PIE Forum, Anderson admits he is no technical wizard. "I barely know the difference between RAM and ROM," he says, brushing it off since the Newton is so easy to use. "I'm paid to go to a place and dream, to come up with images that don't already exist. I can concentrate on the creativity and let the Newton organize the business. It makes me work smarter," he concludes.

In just a few years mobile computers have eliminated the office ties that bind. The rich storehouse of data in the filing cabinets, mainframe computer, and local-area network either fit neatly in the mobile computer or can be accessed with it from distances near and far. Also, dispersed employees can communicate with ease. Mobile computers have freed us to work almost anywhere while still enjoying the resources of the corporate office. "Your office is wherever business is done," says author Banks. "The main office is no longer the center of the workplace because it doesn't have to be." ☎

See "Mobile-Computing Favorite Files," page 18.



# Outgoing Uploads: Mobile-Computing Favorite Files

Special shareware and freeware utilities for mobile computers, as well as text files that will help you get the most from your portable machine, are available in a number of CompuServe forums. The following files are a sample.

## Dell Forum (GO DELL)

**Stickies Version 2.5**—Windows note manager with color and font options, 1-million-note file cabinet, alarms, e-mail support, and more. Library 12, "User Uploads," ST25.EXE (344,757 bytes).

**Modem Troubleshooting**—Utility allows you to send any characters to any port. Library 12, SETDEV.ZIP (31,616 bytes).

**Traveler's Clock**—Shows and calculates time zones; features an unobtrusive display on LCD screens. Library 12, TRAVCL.ZIP (25,164 bytes).

## HP Handhelds Forum (GO HPHAND)

**Notepad**—Application for entering, organizing, and viewing free-format and semi-structured information on the HP 95LX palmtop. Library 7, "95LX General," NOTEPA.ZIP (77,925 bytes).

**Multi-day Calendar**—Provides continuously scrolling and week-at-a-glance view of appointments with single-key access for editing, inserting, and checking off appointments, anniversaries, 24-hour clock, and more. Displays a graphical time line of appointments, and searches rapidly for an appointment or a free time slot. Library 7, MUCLDAY.ZIP (40,832 bytes).

**Word Processor**—Small, fast, power editor/word processor features multiple files, auto format, macros, menus or WordStar commands, and more for notebooks, subnotebooks, and palmtop computers. Library 7, VDE.ZIP (15,197 bytes).

**95Buddy**—Adds many features to the built-in applications, including default directories, file-selection hot keys, changeable Phone Book card field labels, improved Memo search functions, and more. Library 7, BUD95.ZIP (133,212 bytes).

**Phone Book**—Easier-to-read application for the HP 100LX with a speed-locate function. Library 11, "100LX General," HKFON.ZIP (9,472 bytes).

**100BUDDY**—Adds many features to HP 100LX, including point-and-click file loading, keyboard shortcuts, d-click, blue-key remapping, Smart-

Caps, global password, sticky Ctrl and Shift, visual alarm, function-key labels, and more. For English machines only. Library 11, BUD100.ZIP (91,648 bytes).

**Automated CompuServe Access**—Use AcCIS to download CompuServe Mail and forum messages, read and reply offline, send binary mail, scan forum libraries, browse catalogs offline, and mark files for download at next session. Library 14, "HPHand Vendors," ACCIS.ANN (74,897 bytes).

## HP OmniBook Forum (GO HPOMNIBOOK)

**Memory Managers**—Text file describing how to use third-party memory managers, such as EMM386, QEMM, and 386MAX, to create more Lower DOS memory on the HP OmniBook 300. Library 4, "DOS: General," MEMMGR.INF (5,782 bytes).

**Modem Installation**—Step-by-step instructions on installing a Megahertz PCMCIA modem in an HP OmniBook 300. Library 5, "DOS: Datacomm," MEGHTZ.APP (1,332 bytes).

**Voltage**—Two Windows Applets to display battery voltage and system temperature. Library 7, "Win: General," OBTOOL.ZIP (16,830 bytes).

## IBM Communications Forum (GO IBMCOM)

**Change Phone Numbers**—Simple menu program in the same format as GO PHONES allows you to choose from a list of phone numbers and baud rates and then launch CIM. Shareware. Library 2, "Comm Utilities [C]," CIMSEL.ZIP (39,692 bytes).

**Travel Kit**—Help for connecting your computer to a U.S. or international hotel phone, including discussion of types of problems you may encounter as well as solutions. Library 7, "Modems/Comm Hdw [C]," TRAVEL.ZIP (12,152 bytes).

## IBM Hardware Forum (GO IBMHW)

**Professor P.C. Laptop**—Ultimate laptop tutorial for portable computers, including purchasing strategies, NiCad battery charging, software selection, little-known CompuServe files and forums for laptop information, hard-drive tutorial, special DOS lessons, and more. Shareware. Library 6, "Small Computers [H]," LAPTUT.ZIP (251,552 bytes).

**Rundown Version 2.0**—This utility will totally discharge the laptop's battery, recording the total time the battery will run the laptop. It maintains a history file of the last 23 cycles. Library 6, RUNDWN.EXE (39,801 bytes).

**Battery Master Version 1.5**—Works on battery-powered computers to monitor and predict battery performance based on computer use. Displays critical information about the amount of battery power remaining. Library 6, BM15.ZIP (150,400 bytes).

**Reward Version 2.01**—Security measure for portable computers. Library 6, RWARD2.ZIP (38,590 bytes).

## Macintosh Hardware Forum (GO MACHW)

**Control Strip Modules Version 1.0.0**—Collection of control strips displays current time and replaces Apple's sound-volume and sleep-now modules. Library 5, "The PowerBook," JC5MIA.SEA (83,968 bytes).

**PowerStrip Version 3.3.1b**—Displays free RAM, free hard-disk space, current time, date, CPU speed, modem status, and a battery bar graph in clean rows across the bottom or top of the PowerBook screen. Library 5, PWRSTP.SIT (48,384 bytes).

**BatteryAmnesia 1.3.0**—Most PowerBook batteries are susceptible to "memory effect," which can reduce the charge capacity. Battery amnesia will deep-discharge the battery to avoid memory effect. Library 5, AMN131.SEA (92,056 bytes).

**MyBattery 2.2.4**—Essential monitoring utility for PowerBooks shows the current battery voltage via user-selectable graphic displays and estimates remaining battery time. Library 5, MBAT2E.SEA (116,480 bytes).

**Cursor Locator**—This utility makes it easier to find the PowerBook's cursor. Library 5, POWER.BIN (1,920 bytes).

**Modem Commands**—Complete listing of AT commands used by the Apple Express Modem for PowerBooks. Library 5, EMINFO.SIT (17,536 bytes).

**Modem Off**—KILLEM FKEY sends a "quit" Apple event to the Express Modem software running in the background on the PowerBook, saving the modem and processing time, as well as extending time between battery charges. Library 5, KILLEM.SIT (2,048 bytes).



**Zync Version 1.0a4**—File-reconciliation utility automates updating of files on a desktop and portable computer. Remembers date and time of last backup to warn of possible overwriting of latest version. Library 5, ZYNC.SIT (12,416 bytes).

**Airport QuickStart**—System extension boots the PowerBook instantly and displays a fake spreadsheet to satisfy airport-security personnel that your PowerBook is a computer and not a bomb. Two buttons allow you to shut down or continue standard startup process. Library 5, AIRPOR.SEA (21,888 bytes).

#### Newton/PIE Forum (GO NEWTON)

**Keyboard Utilities**—A snappy set of keyboard utilities, including one that lets you type directly to your Newton from your PC. Library 6, "Newton/PIE <=> PC" FIGGLE.SIT (144,128 bytes).

**List-It Version 2.5.2**—Newton list manager fixes memory problems and allows you to create lists of all sorts. Library 8, "Newton Packages," LISTIT.SIT (92,800 bytes).

**MPG**—Log book for your car tracks fuel use, oil changes, tune-ups, inspections, tire rotations, windshield wipers, car washes, and more. Library 8, MPG130 (74,624 bytes).

**QuickFigure Lite**—Fast, compact spreadsheet that supports all standard Newton math and financial functions, as well as printing, faxing, beaming, and NewtonMail. Library 8, QFLITE.ZIP (33,101 bytes).

#### Palmtop Forum (GO PALMTOP)

**Application Notes**—Covers scripting, modems, faxing, printing to parallel printers, and more for the Sharp Wizards. Library 3, "Sharp Wizard," APPHP.ZIP (25,743 bytes).

**Holidays**—Folder with U.S. holidays; will also add several anniversaries and other dates. Library 3, HOLDAY.FLD (3,584 bytes).

**ThreeCIS**—CompuServe automation script that configures the Psion 3a's serial port, initializes the modem, dials, logs on, retrieves waiting mail, sends mail, sends binary mail, visits three forums, captures messages, and retrieves AP News, Online Today, financial quotes, and Weather. Library 7, "Psion Inc.," 3CIS.ZIP (16,685 bytes).

**Free File Manager Version 4.1**—Includes user-definable submenu for launching programs from the Psion's shell. Library 7, JBTRE4.ZIP (27,400 bytes).

**Macro System**—Alternative macro system allows you to create macros for any application built into the Psion Series 3a. Up to 22 macros can be supported at one time, each with its own hot key. Library 7, MACSYS.ZIP (20,030 bytes).

**Notepad Version 4.6**—Full-screen text editor for entering notes on the Psion. Library 7, NP46.ZIP (110,504 bytes).

#### Palmtop B Forum (GO PALMB)

**ZComm Lite Version 1.00**—General-purpose communications program for the Casio Z-7000 PDA. Library 4, "Casio Z-7000," ZCOMLT.ZIP (9,813 bytes).

**Frequently Asked Questions**—Questions and answers about the Z-7000. Library 4, ZOOMER.FAQ (9,819 bytes).

**Tips & Tricks**—Z-7000 tips and tricks. Library 4, ZOOMER.TIP (20,150 bytes).

#### Toshiba Forum (GO TOSHIBA)

**Flip It**—Utility to invert the monochrome display of a T4500. Library 2, "Toshiba Software," FLIPIT.EXE (3,433 bytes).

**DOS Enhancement**—Toshiba's Special Enhancement Package for MS-DOS 6.2 that ensures compatibility between DOS and Toshiba's proprietary features. Library 2, TSEP62.EXE (566,018 bytes).

**Battery Timer**—Simple Windows program measures "real life" battery life on your machine with your settings, your applications, and your habits. Library 3, "Toshiba Related," BATIMR.ZIP (11,282 bytes).

**COLAP**—Small TSR utility for color laptops. Provides a substitute for the contrast control by adjusting the VGA palette. Can also blank the screen. Special features control backlight and hard-disk standby on Toshiba laptops. Library 3, COLAP2.ZIP (5,768 bytes).

**Switch It**—Switch between a Toshiba laptop layout and an IBM-enhanced layout. Library 3, TSWITC.ZIP (2,129 bytes).

**Portable Printers**—Various contributions to the question: What is the ideal portable printer? Those mentioned are Cannon, Citizen, Diconix, and Hewlett-Packard DeskJet portable printers. Touches on print-quality comparison and packing supplies for the road. Library 4, "Text Files," PORTPR.THD (10,576 bytes).

**Travel Answers**—Information on use of hotel phones with laptop computers and modems, airport security, X-ray and magnetic hazards, international electrical power, tools and devices to carry, using computers in-flight, and more. Library 4, LAPTOP.ARC (10,904 bytes).

**Caps Lock/Ctrl Reverse**—Windows keyboard utility to reverse Caps Lock and Ctrl. Also controls shift status, Num Lock, and Scroll Lock. Library 5, "Other Utilities," WINKEY.ZIP (43,851 bytes).

**Takelt Version 1.2**—Provides remote network access for notebooks. Library 5, VDE171.ZIP (151,977 bytes).

**File Transfer**—Transfer files between computers over a serial cable with ZIP.COM at speeds up to 115,200 bps. Can compare or create directories, back up changed files or entire directory trees. Requires "null modem" cable. Library 5, ZIP.ZIP (36,721 bytes).

#### Zenith Data Systems Forum (GO ZENITH)

**EZX-Word Laptop**—Powerful and compact WordStar-compatible word processor with spell checker for notebook computers. Library 6, "DOS Applications," EZXWLT.ZIP (229,747 bytes).

**Notebook Version 1.0**—Personal Information Manager for notebook and subnotebook PCs, featuring special design for use with a small screen. Includes color editor, personal title, calendar, phone and visit cards, and more. Library 15, "Windows," NT2000.ZIP (302,080 bytes).



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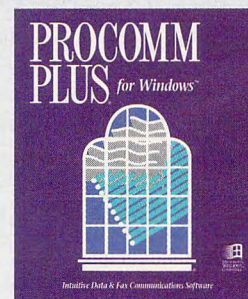
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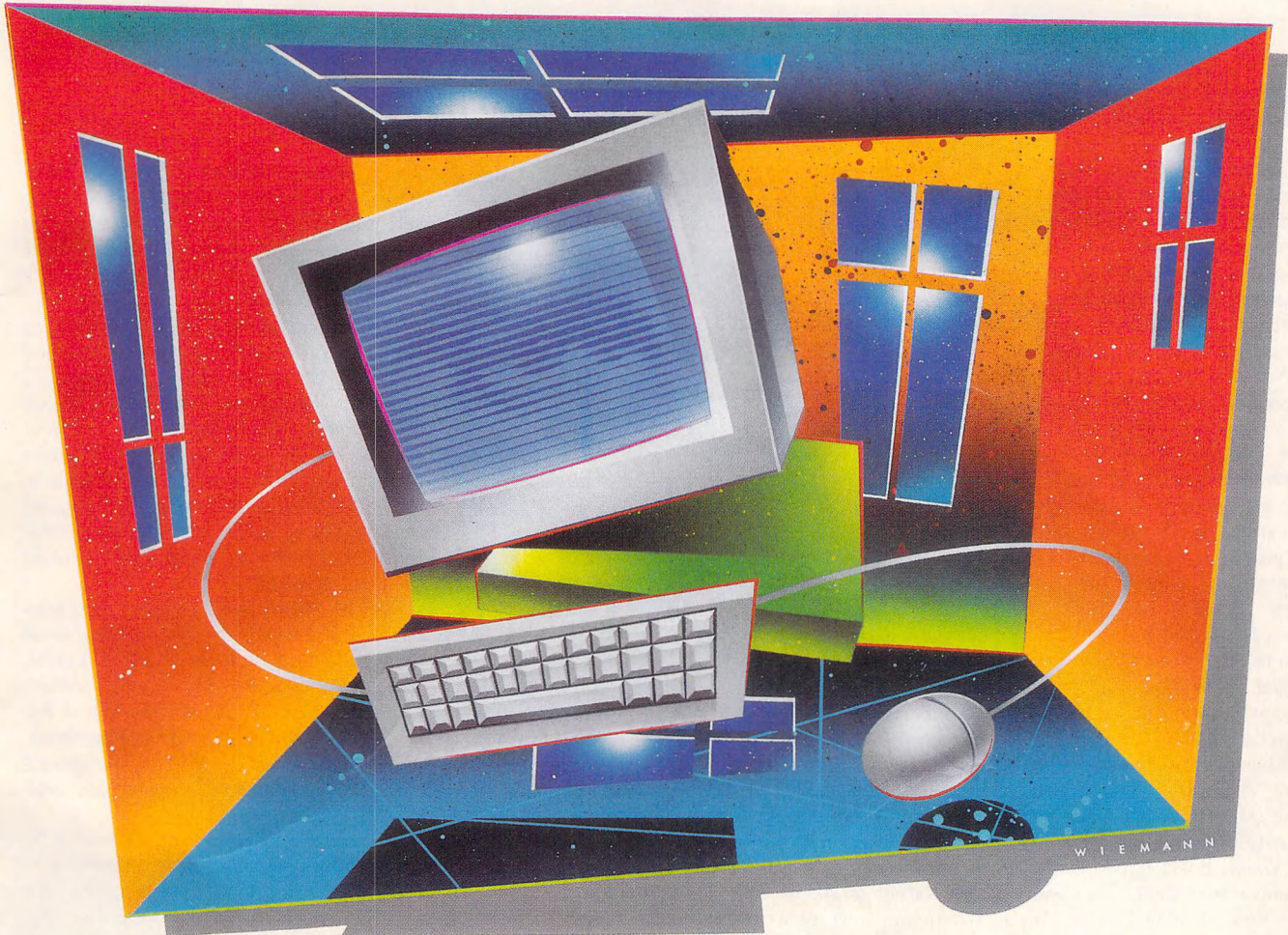
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ROY WIEMANN

# Filling in Windows' Cracks

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► **On hold until Microsoft's Chicago arrives, 3.1 users look for ways to kick the aging system into gear.**

Windows isn't broken, but the two-year-old program is definitely an old-timer in today's fast-paced computer industry. Windows 3.1 was born in May 1992, back in a world ruled largely by '386 computers, MS-DOS 5, and 16-color VGA cards. Today, that same version of Windows is living on Pentiums, controlling 16.7 million color video cards, and playing videos from CD-ROM drives—if it can handle the pressure, that is.

To keep their venerable version of Windows chugging along, users are buying more powerful hardware, tweaking Windows' mysterious configuration files, and pondering whether Windows for Workgroups really works faster than Windows. CompuServe members are swapping plenty of online advice, but the answer's not always easy: a tip that enhances Windows on one person's system can just as easily break another system. Still, many CompuServe members never tire of searching for new ways to wring an extra

ounce of performance from an aging operating environment.

For example, Windows success often depends on dependable *drivers*—software that lets Windows communicate with peripherals such as sound and video cards. If a driver doesn't work well, neither will Windows, causing anything from printing problems and random error messages to a suddenly indecipherable screen. Brad Braun, a recent Windows convert from Perkasio, Pennsylvania, noticed the driver packaged with his new video card was several months old, so he began looking for a replacement. Within two months, Braun had downloaded and tested six different versions of drivers from the video-card company's BBS; eventually, he chose the one earning the highest marks on *PC Magazine's* WinBench, a performance-measuring utility for Windows. "Even if your old drivers work," he says, "there are performance advantages to be gained by using the

*Andy Rathbone is a San Diego-based writer who recently completed the second edition of IDG Books' Windows for Dummies. His CompuServe User ID number is 75300,1565.*



# Visual Basic, or Why You Need Those VBRUNs

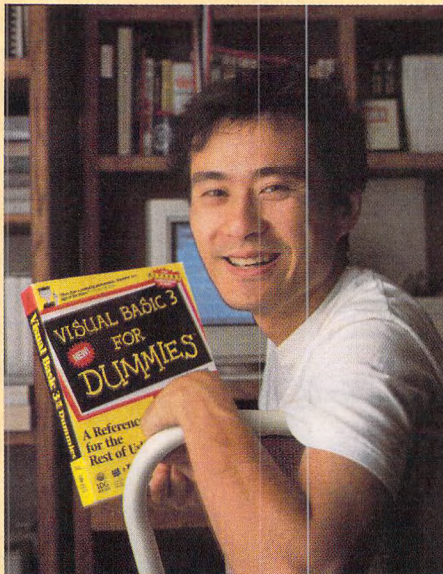
Although Microsoft Windows may have made computers easier to use, it certainly made them more difficult to program. That point-and-click interface that looked so simple on the screen was time-consuming for programmers as they struggled to write software that conformed to Windows' demanding graphics requirements.

Not one to miss a market, Microsoft responded with Visual Basic, a programming language boasting point-and-click ease. Released in 1991 and now on a well-received Version 3.0, Visual Basic comes with a big bag of Windows parts: the fast-forward/rewind buttons used by multimedia programs, for example, and menus for opening and closing files. Programmers write software by arranging the pre-constructed controls across their screen, then telling the parts how to behave when clicked. With Visual Basic, programmers can spend less time building buttons and more time on the software itself.

Known as object-oriented programming, Visual Basic is quick and simple, and it's been used to write some of today's best-selling programs, including Microhelp's Uninstaller and Microsoft's own Profit accounting program.

"Visual Basic is popular because it's so easy to use to create Windows programs," says Wally Wang, author of *Visual Basic for Dummies*. "Unlike C++ or Pascal, where you have to write commands to do everything, Visual Basic lets you doodle on the screen, and that's your user interface. Write code to tell it what to do, and you're done."

Previous Windows development tools such as C++ or Pascal were complicated and clumsy, making programmers rely on huge manuals. Visual Basic is easier to use, but even more important, it still packs enough of a punch to get the job done. For example, although Visual Basic comes with a wide variety of programming controls, it also lets users add their own. Need a programming



Visual Basic easy enough for "dummies": Wang

template for a specialized database? Want multimedia support? Third-party vendors sell hundreds of Visual Basic add-ons or "extensions," letting programmers handle a large variety of computing tasks in a smaller amount of time.

"The programming backlog is getting worse," says James E. Fawcette, editor and publisher of *Visual Basic Programmer's Journal*. "People need tools that speed development. Visual Basic is the most productive tool for writing custom Windows applications. It is also the first—to date, the only—open programming environment that enables a community of add-on tools that can turn Visual Basic into whatever the developer needs."

Visual Basic isn't without its drawbacks. It'll never be as fast as lower-level languages such as C++ or Turbo Pascal, Wang says. It's not as portable, either: although Microsoft has written Visual Basic for DOS, it has ignored the Macintosh. Also, Visual Basic for Windows programs

require supporting files before they'll run—they're not self-contained.

"The MS-DOS version can compile programs into a true EXE file," Wang says, "but the Windows version doesn't. Instead, it compiles it into a pseudo EXE file that your computer has no idea how to use. That's why you need those silly VBRUN.DLL files that gobble up hard-disk space and come in different versions—VBRUN100.DLL, VBRUN200.DLL, and VBRUN300.DLL. It's messy."

Visual Basic isn't about to go away, however, says Fawcette; it's too quick and powerful. "Many C programmers look down their nose at Visual Basic, but most of them are merely remembering old Basic and really haven't taken the time to seriously evaluate Visual Basic."

—AR

current driver."

Another user, Nathaniel Merriam, an illustrator from Houston, couldn't find any driver to make Windows work well with his older video card from Diamond Computer Systems. Giving up on Diamond, Merriam headed for the "Tseng Labs" section of CompuServe's Graphics B Vendor Forum. Merriam downloaded Tseng's generic video driver and found it worked perfectly—even on Diamond's card.

Erik Skamser, a clinical social worker and weekend programmer in Forest Park, Illinois, also reports higher performance from switching to newer video drivers. "I'm constantly upgrading to the newest drivers, which I find almost exclusively on CompuServe," Skamser says. "It's only now, with this newest driver, that I'm truly satisfied with my video card."

Microsoft's Software Library contains some of the latest Windows drivers, as does

the Windows Users Group Network Forum. Vendors often carry Windows drivers for their own products as well; ProAudio Spectrum sound-card drivers appear in the Media Vision Forum, for example. Still, other hardware manufacturers make updated drivers available for download on their company's own BBS.

If new drivers don't do the trick, more powerful hardware can often give Windows the extra boost it needs. Today's computer shoppers can choose between local bus video or Intel's PCI (Peripheral Component Interconnect) technology—both video technologies help Windows scoot across the screen more quickly. Local bus and PCI technologies are built into a computer's motherboard, however; owners of older computers can speed up the action by buying a video-card accelerator instead.

"Keeping Windows going has become a

never-ending cycle of hardware and software changes and upgrades," says computer tinkerer Ken Wilcox. "I upgraded my system at the beginning of last year to run Windows 3.1, and have had a lot of minor upgrades and done extensive tinkering since." After settling for a '486DX2-66, 12MB of RAM, a 1.3GB hard drive, a Diamond Viper VLB graphics accelerator card, a Sound Blaster card, and a triple-speed NEC CD-ROM drive, Wilcox has an expensive system—but it runs Windows well, even with his small LANtastic network.

Other users look for software-based solutions. While users eagerly await Chicago—Microsoft's much-heralded successor to Windows 3.1—some have tried switching to Windows for Workgroups. Designed for computer networks but also hailed as a general performance booster, Windows for Workgroups earns raves from many users. "Win-

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dows for Workgroups brought Windows a little closer to what it technologically *should* be," says Merriam. Microsoft learned a lesson from Windows' history, he says, finally breathing new life into an old product.

Dennis Eskow, editorial director of *Windows Sources* magazine, also recommends the software. "Windows for Workgroups on a PCI bus with clean INI files works like blazes," he says. Windows keeps notes about programs in files ending in the letters INI;

unfortunately, the files often become cluttered with outdated information about deleted programs.

Other users aren't quite as happy with Microsoft's latest technology. Gordon DeGrandis, a computer consultant in Brussels, Belgium, liked how Windows for Workgroups improved the high-speed performance of his computer's COM ports. Unfortunately, Windows for Workgroups' 32-bit file

access was incompatible with Microsoft's own Undelete program, the program that helps DOS and Windows users retrieve accidentally deleted files. Microsoft's recommended solution? Exit Windows for Workgroups and run the Undelete program from DOS. "I vote for a Windows for Workgroups Undelete utility," DeGrandis grouses.

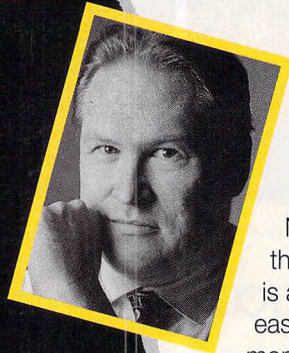
Windows for Workgroups' 32-bit file access also backfired on London-based Stephen Northwood, making his system run more slowly than it had under Windows 3.1. The problem? The 32-bit technology is also incompatible with Stac's Stacker 4.0 disk compression. "My system slowed down very noticeably with 32-bit file access enabled," Northwood says. "Without the speed benefit, the upgrade was a waste of money."

CompuServe members share Windows tips in just about every forum, but here are some of the most popular:

- ▶ If your computer becomes sluggish during the day, try exiting Windows, then loading it up again. Some programs won't give back any borrowed Windows resources when they quit. "Enough of that during any session and it'll eventually crash the system," says Steve Rindsberg, president of a slide-imaging service in Cincinnati, Ohio. "Quitting Windows and restarting it frees up those resources again."
- ▶ When updating a utility program, be sure to remove the old one first. "That prevents the problem of new files not getting installed over the old ones," says Sasha Mobley, an online-services administrator for Adobe Systems Inc.
- ▶ Is your CD-ROM drive running slowly under Windows? Kevin Kelly, a director of real estate in Sunnyvale, California, recommends upgrading to DOS 6.2, which can cache a CD-ROM drive, speeding it up significantly, but only if your AUTOEXEC.BAT file is finely tuned. "The line loading MSCDEX *must* precede the line that loads SMARTDRV," Kelly cautions.
- ▶ Get a big boost in Windows speed by replacing your hard drive. Although only a year old, Kelly's hard drive had a transfer rate of 900K per second. A newly installed drive boasted a 2,000K transfer rate, letting Windows access the hard drive twice as quickly. "All that came from changing a good disk that was less than a year old," Kelly says. "At \$385 for a 540MB hard drive, that was the best investment I ever made."
- ▶ Give Windows a permanent swap file—a file enabling Windows to juggle more programs than it can fit in memory. In the Virtual Memory area of Control Panel's '386 Enhanced section, choose a setting of 4MB, even more if you're a heavy DOS user. "I settled on a 10MB permanent swap file," says Jeff Bankston, a systems

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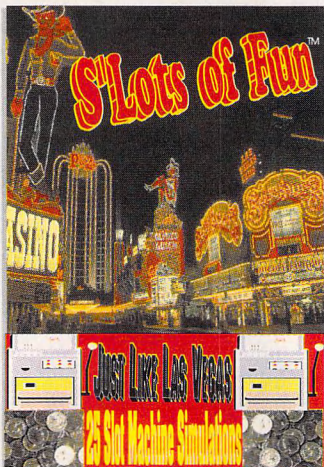


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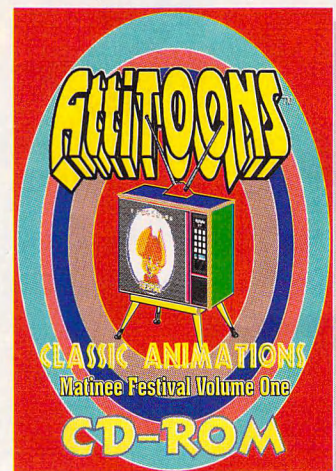


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- Increase your computer's RAM to at least 8MB. With only 4MB, Windows spends too much time moving information back and forth from its swap file. "The added memory drastically reduces this swapping of data from memory to disk," Bankston says.
- If a new Windows program asks for a file beginning with VBRUN, it was written in Visual Basic (see "Visual Basic," on p. 22). Head for the IBM New User's Forum's Library 2, "Library Tools," and download the version it's asking for: VBRUN100, VBRUN200, or VBRUN300. Copy the file to your WINDOWS:SYSTEM directory, and the program should run without any problem.
- Keep your Windows video card set at 256 colors; video cards displaying more colors can slow Windows down, says Paul Friedman, primary sysop of ZiffNet's PC Contact Forum.
- Avoid fancy shell programs. Although PC Tools for Windows, Norton's Desktop for Windows, and similar programs can be useful, they also use significant amounts

of memory and hard-disk space. "Using these shells rather than Program Manager will often result in reduced performance," says Friedman.

- If you're not using a font, remove it. The more fonts you install, whether TrueType or Postscript, the slower Windows will load. Also, each additional font increases memory usage.
- When you're through using a program, close it down. Minimize windows you're not using. And if you are using a program with heavy graphics, don't use wallpaper; it eats up resources and makes the screen slower to redraw.

Robert Phillips, leader of the "Adobe Illustrator" and "Photoshop" sections of the Adobe Forum, says Windows success comes mostly from keeping things simple. Phillips doesn't use hard-disk-compression programs, SCSI drives, virus checkers, or Windows for Workgroups—and his computer works just fine. "It's not the snazziest setup around, but snazzy counts for little when your computer locks up," he says. "Keep it simple. Keep it major-brand and generic." ☐

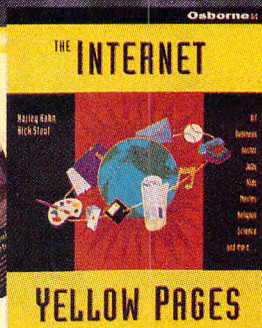
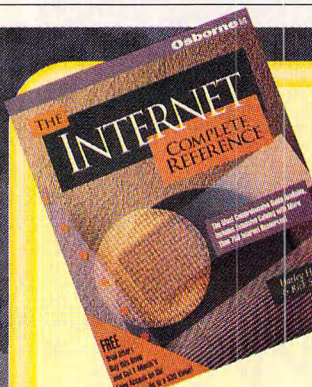
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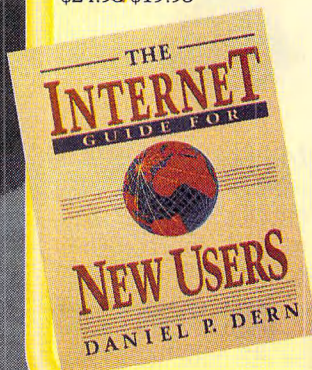
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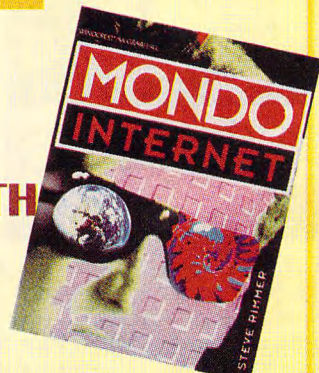
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# Windows Fixers: Patching Files From All Over

Microsoft-related forums are plentiful on CompuServe. A search using the keyword MICROSOFT yields a list of them all, a dozen or so of which are run by Microsoft itself. In Microsoft's Windows Forum (GO MSWIN), for example, Microsoft staffers offer technical support for Windows-related problems. Other forums are unaffiliated with Microsoft; run by third parties, they provide hangouts for Windows users to share their experiences and discuss other vendors' products.

Here are some of the most popular files found in both types of forums.

## Executives Online Forum (GO EXEC)

**Breaking Windows**—Thread archive of Matt Lake, author of *Breaking Windows*, discussing many programs' secret screens, plus little-known tips about Windows. Library 17, "Guest Archives," BRKWIN.ZIP (16,075 bytes).

## Graphics B Vendor Forum (GO GRAPHBVEN)

**Tseng ET4000 Drivers**—Contains all the files included on the generic Tseng ET4000 driver diskette for Windows 3.1. Library 2, "Tseng Labs," W31ET4.ZIP (581,632 bytes).

**Tseng ET4000/W32/W32i/W32p Drivers**—Contains all the files included on the generic Tseng ET4000/W32/W32i/W32p driver diskette for Windows 3.1. Library 2, W31W32.ZIP (603,849 bytes).

## IBM New User's Forum (GO IBMNEW)

**VBRUN**—Each version of Visual Basic requires its own supporting file before it will run any Visual Basic program. VBRUN2.ZIP, for example, enables Visual Basic Version 2 to run. Library 2, "Library Tools," VBRUN1.ZIP (173,177 bytes), VBRUN2.ZIP (220,049 bytes), VBRUN3.ZIP (231,424 bytes).

## Microsoft Software Library (GO MSL)

**Windows 3.11 Update**—Updated versions of eight core Windows 3.10 files; copy them to your hard disk to update your system to Windows 3.11. Licensing information is also included. (Windows 3.11 isn't compatible with OS/2 for Windows.) WW0981.EXE (599,272 bytes).

## MS Windows Forum (GO MSWIN)

**Windows 3.1 Information**—Question-and-answer file from Microsoft on Windows 3.11, the "refresh" version of Windows. Library 1, "Index and Info," 311QA.TXT (6,879 bytes).

**Chicago News**—Microsoft's description of Chicago, the code name for the next major release of Windows. Library 1, CHICQA.DOC (47,104 bytes). For more Chicago-related files, visit the MS Windows News Forum (GO WINNEWS).

**SmartDrive Information**—Question-and-answer file from Microsoft on SmartDrive, the disk-caching utility included with Windows. Li-

brary 8, "SmartDrive," SMRTDR.ZIP (2,432 bytes).

## PC Contact Forum (GO PCCONTACT)

**Windows Tips**—501 hints, tips, tricks, and solutions for working in Windows, compiled by the editors of *PC/Computing*. Library 1, "Hot Tips/Secrets," PCC501.ZIP (265,002 bytes).

## Utilforum/Tips Forum (GO TIPS)

**Command File Interpreter**—WINCMD creates simple Windows 3.1-specific programs to automate repetitive tasks; its language includes looping and branching statements along with user-defined subroutines and functions. Library 2, "PC Mag Utilities," WINCMD.ZIP (99,398 bytes).

**Windows Performance Benchmark**—WinBench 4.0 measures a computer's graphics and disk performance under Windows. Library 13, "PC Labs," WINBEN.EXE (1,324,816 bytes).

## Windows Sources Forum (GO WINSOURCES)

**Win Bar Clock**—Displays time, date, memory, resources, and other options in the current window's title bar. Library 3, "General Shareware," WBARCL.ZIP (113,140 bytes).

**Windows Tips**—A collection of 1,001 Windows tips excerpted from 15 Ziff-Davis Press books and formatted into a Windows help file. Library 6, "Tips & Techniques," WINTIP.ZIP (508,746 bytes).

**Windows Setup Guide**—"The Ultimate Guide to Setting Up Windows Right," by Herb Chong. Describes INI sections, settings, and more in a Word for Windows document. Library 6, WSGUID.ZIP (29,627 bytes).

## Windows Users Group Network Forum (GO WUGNET)

**WindSock**—Windows performance-analysis utility, measuring a system's CPU, video, disk, and memory speed from Windows' point of view. Library 4, "Config Secrets," WSK320.EXE (180,473 bytes).

**Windows Information**—A collection of Windows tips and tricks stored in Write format. Library 11, "WUGNET News/Files," TIPNO1.WRI (10,880 bytes), TIPNO2.WRI (17,152 bytes).

**Cirrus Logic Drivers**—Windows 3.1 video drivers for video cards based on the Cirrus Logic CD5426 and 5428 chips. Library 14, "WUG Driver Support," 5426\_W.ZIP (876,336 bytes).

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gm	General Motors	42.375	250.000	45.000	50.000	12584	51.625	50.625	50.875	-0.500	\$12,718.75	\$2,125.00
ibm	IBM	49.500	300.000	50.750	65.000	26957	57.125	55.375	55.625	-1.000	\$16,887.50	\$1,837.50
nyt a	New York Times-A	22.000	100.000	20.500	25.500	618	24.000	23.625	23.750	0.000	\$2,375.00	\$175.00
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tah	AT&T Call Jan95 40					3	14.000	14.000	14.000	-0.625		
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# Viruses: Gone or Just Forgotten?

## ► Where did the disk-space invaders go? In for a tune-up, apparently.

The threat viruses pose to computer users has largely escaped media coverage since the excessive attention paid to the Michelangelo strain a few years ago, yet they are still with us and possibly even more dangerous. While earlier strains were unsophisticated and easy to detect, new viruses use craftier techniques that leave no detectable fingerprint; don't need to piggyback on executable programs to function; and can even hide from antiviral software and change their form to survive.

Viruses, special-purpose programs whose sole purpose is to survive and spread by quietly replicating themselves onto other hard and floppy disks, do everything from display prank messages to destroy a computer's file system, says Ed Savage, an OEM marketing manager with Trend Micro Devices Inc., maker of the PCRx antivirus program.

Savage divides viruses into three groups: boot-sector viruses, which write a copy of their own code on the boot sector and run every time you start up; TSR viruses, which hide in memory and take control of the operating system; and application viruses, which modify program files so they are executed first. PCs are in greater danger of infection than Macintoshes, since there are more IBMs and compatibles, and thus more PC programmers and users. "It's very, very easy to write a PC virus, but it's somewhat harder on the Mac," says Richard Ford, a co-sysop of the NCSA (National Computer

Security Association) InfoSecurity Forum and editor of the *Virus Bulletin*, published in the U.K. "On the Mac, the software-development tools are expensive and quite hard to get a hold of. And the innards of the operating system are complicated—a programmer needs to understand what he is doing at a very low level in order to write a virus."

Since the first computer virus was discovered in 1986, nearly 4,000 have been developed, the numbers growing more rapidly in recent years, according to Ford. The reason for the increase? Virus code is easy to attain, and books and magazine articles explaining what to do with it are just as available, he says. "It's legal in the United States to obtain and publish virus code," says Ford. Indeed, a number of CD-ROMs filled with viruses are advertised and sold on the wholesale market. "We have also seen virus authors become better organized and begin to work together," Ford adds. Most authors don't actually collaborate in creating viruses, but they do exchange the code and encryption kernels that constitute them, as well as their completed viruses, via encrypted e-mail, BBSs, and the Internet.

Who are the culprits? Virus creation is often the work

of "crackers" (malicious hackers), disgruntled employees, research laboratories, and Eastern Bloc computer-programming students whose skills are rendered useless by the region's anti-ethic of legal software piracy. It's also been aided by the Internet-fed distribution of illicit viral "engines" and user-friendly building kits, with names such as Dark Avenger and the Virus Construction Laboratory.

The resulting new viruses are both more complex and more difficult to detect. Early strains such as Jerusalem and Stoned were easily spotted by scanning for their "signatures" (unique strings of programming code) or other telltale signs: modified file dates and files whose size had mysteriously grown. But the new "polymorphic" viruses mutate as they spread, varying their code randomly or using encryption to hide their signatures. Ford describes Pathogen, or SMEG, as a polymorphic virus that infects DOS COM and EXE files and contains a destructive trigger routine that corrupts information on the first fixed disk. It also alters the contents of CMOS memory, making use of the PC troublesome or impossible. SMEG made the headlines in the United Kingdom because it was discovered in the "wild"

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### Where to GO

Cyber Forum  
**GO CYBERFORUM**

Journalism Forum  
**GO JFORUM**

McAfee Virus Forum  
**GO MCAFEE**

NCSA InfoSecurity Forum  
**GO NCSAFORUM**

Symantec Forums  
**GO SYMANTEC**



# Code of Dishonor? The Ethics of Computing

What's inherently wrong with creating and distributing viruses? That's just one of the issues falling under the rubric of computer ethics, a developing area discussed in the new NCSA (National Computer Security Association) InfoSecurity Forum's Section 2, "Ethics/Privacy."

The key ethical problems faced in cyberspace range from theft of proprietary information and copyrighted software to the future of artificial intelligence, according to Dr. Mich Kabay, director of education for the NCSA. Closer to where many of us live and work, the NCSA is also concerned with such issues as "cracking" an employee's encrypted or password-protected files.

The issues are complicated. How do you draw the line between the employee's right to privacy and the employer's right to access to data or mail about the business? Or who is responsible for the distribution of viruses? What should a company do about an employee who inadvertently brings a virus to the office from home?

"Unfortunately, many of these ethical questions cannot be answered with an exact answer," says Jonathan P. Wheat of the NCSA. "The creation and distribution of viruses is not illegal, because it is very hard to prove who created a virus." And if such a law were written, he adds, "how do virus researchers and vendors distribute their virus collections and newly discovered viruses? And if there is an exception in the law stating that it is fine for virus researchers to distribute them, who decides who is legitimate? It's a tough problem to deal with."

In an attempt to set an ethical standard, or at least a place to start a discussion, the NCSA InfoSecurity Forum has posted Ten

Commandments of Computer Ethics. The list includes such easily understood basics as "Thou shalt not use a computer to harm other people," as well as more sophisticated issues such as "Thou shalt think about the social consequences of the program you are writing or the system you are designing."

NCSA is one of several high-profile sponsors (including CompuServe, Symantec, and Ziff-Davis) backing the National Computer Ethics and Responsibilities Campaign, an initiative designed to promote ethical computing practices. Launched last June by Washington, D.C.-based Computer Ethics Institute, the campaign aims to "make responsible use of information technology an item on the national agenda." Campaign activities have included a congressional briefing on computer security and the creation of a national conference on ethical computer practices.

Besides ethics and privacy, the NCSA InfoSecurity Forum encourages lively discussion on a variety of computer and network security issues, from antivirus support and disaster recovery to encryption, telecommunications security, and computer crime.

Consistent with its stated goal of "providing educational materials, training, testing, and consulting to help users improve computer and information security," the forum's libraries are rich with reference materials, from symposium proceedings to a primer on viruses. For copies of *Risks Forum Digest*, a moderated Internet digest of articles, speeches, and other material on risks to the public in computers and related systems, check Library 11, "RISKS/VIRUS-L."

—JS

(on a home or office computer or PC network). This meant that the antivirus industry wasn't aware of how extensively it had spread, though it turned out to be relatively rare.

Many other viruses simply use new "stealth" techniques. "Stealth viruses are like the invisible man—you can't see them, but they can see your system," Savage explains. They avoid recognition by bypassing DOS interrupt calls when installing themselves (hiding by subtracting their own byte size from the file's size) and removing their code from infected files. The 4096 virus increases the file size by 4,096 bytes and reduces operating memory by approximately 6K, Savage says.

Simpler viruses are still being written, and are no less dangerous. Form is the most common virus in the United Kingdom and is also spreading in the United States, Ford says. It infects the boot sector of fixed disks and boot sector of diskettes. It contains no destructive trigger routine, but on the 18th day of any month causes the PC's speaker on an infected machine to emit a click every time a key is pressed.

Most viruses do some kind of stealthing, whether hiding file-size changes, disinfecting a file being inspected while the virus is in memory, or burrowing underneath the operating system to evade antivirus software, says George C. Smith of Pasadena, California, author of *The Virus Creation Labs* (American Eagle/U.S.; Addison-Wesley/Europe; 1994) and member of the Cyber and Journalism forums.

Smith spent a year researching and writing his book, interviewing such virus writers as "Screaming Radish," a Windows-applications developer from Australia, and "Little Loc," a 16-year-old from San Diego. Screaming Radish wasn't interested in making viruses that corrupted data—he liked to "reverse engineer" antiviral software, taking it apart to study what signatures it scanned for and what things the software excluded from its scrutiny. "Little Loc, on the other hand, wanted to be the most dangerous virus writer in America," says Smith. He tried to prove it by writing the Satan Bug, giving it to as many people as possible and telling them to spread it.

Despite the intense activities of virus writers, Smith doesn't see a reason for users to panic. Sophisticated viruses, for the most part, have become mere digital currency in the computer underground, software to trade and collect. In practical terms, Smith says, stealthiness makes little difference, since the most common viruses, which number under 100 and still include Michelangelo, Stoned, and Jerusalem, don't make use of its methods. And despite the difficulty in detecting polymorphics, "the majority of these viruses are not in the wild or a threat to computerists," Smith says.

Aryeh Goretsky, primary sysop of the McAfee Virus Forum, offers a different reason for not overplaying the threat of the more virulent strains: antiviral software companies are up to the challenge. "New viruses are appearing constantly, but the vast majority are derivative of earlier strains," he says.

"Once every four to six months we see something we haven't seen before, such as a new technique for opening a file, or spreading, or hiding."

But there's nothing to be concerned about, he insists. "No virus writer, or group of virus writers working together, will have the same type of resources as the antivirus companies. We have lots of programmers to take viruses apart."

While the media hype over Michelangelo was overblown, the serious damage even common viruses can cause to a business's data files cannot be overstated. That means all users should develop some sort of antivirus prevention strategy. Fixing a system after it has been infected is much more complicated and expensive than preventing infection in the first place.

However, the steps that should be taken to protect PCs from viruses vary somewhat, depending on levels of risk. For example, since most viruses are spread through floppy disks, users who never swap files between systems are probably less likely to be infected than users who frequently share files or programs on disk.

Education, prevention, and detection are the key components of a good antiviral strategy for organizations, according to Ken Bechtel, a data-security consultant from Harrisburg, Pennsylvania, who frequents the NCSA InfoSecurity and McAfee forums.

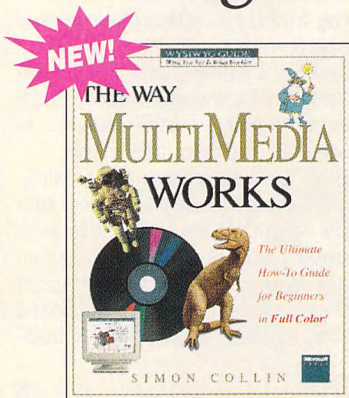
"First, establish an effective company-wide antiviral policy that educates users to what viruses are, where they come from, how they spread, and what are the most common



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symptoms," Bechtel says. "Second, discourage use of personal software at the office and obtain all software from a reliable source, either a BBS or vendor." Bechtel also encourages early reporting of viruslike activity (achievable via programs such as Norton AntiVirus that constantly scan for abnormal system behavior), because earlier detection may mean less infection and less damage. Then, set up a scanning station for people who work at home to check disks prior to use on the company system.

For single-PC users, it's also important to acquire programs and disks from trustworthy suppliers. Viruses can appear from anywhere, including commercial software or PC vendors. Reputable BBSs and online services, such as CompuServe, scan uploaded files for viruses before they're made available for downloading. But not everyone is so careful. McAfee's Goresky warns members to ask retailers about how they handle returned software. "Some retailers may re-shrinkwrap returned software," he says, opening the door for viral infection.

Other precautions will help make recovery after infection much less painful. "You need a way to start up an infected computer without running the virus," says Ford. That means making a clean boot disk, then write-protecting the disk and storing it somewhere safe.

"Don't ever attempt to boot from a floppy!" cautions David Perry, an online support representative for Symantec, maker of the Norton AntiVirus and Symantec AntiVirus for Mac products. "Almost all viral infections seen today are boot-sector infections. These are spread exclusively through floppies," he says. Often, the common DOS error message "Non-system disk or disk error. Please replace and strike any key when ready" comes from a program in the boot sector of an infected diskette. "Boot-sector viruses use that angle to take control of your computer and infect the hard disk. For these viruses, with a few exceptions, no boot means no infection."

Perry also warns against using illegally copied software, which makes you particularly vulnerable to file-infecting viruses. "Many of the infected files I have seen in the wild have been on software for which the manual is mysteriously missing," he says.

Regular backups of the hard drive are also important should a viral infection occur. "File disinfection is a last-ditch attempt to recover your system," Ford says. Because disinfection is often difficult, depending on the type of virus and the quality of the disinfection software, it's generally easier and safer to completely overwrite infected files and reinstall programs from the original disks and data files from clean backups.

Besides prevention and preparation, computer users need virus-scanning programs. A wide variety of antivirus programs are available, many of them shareware or freeware offerings available on CompuServe. (See "Virus Finders, Foilers," on p. 31.) Each pro-

gram uses a slightly different set of tools for detection.

All antivirus products offer at least a scanner or virus detector. Signature scanners work by analyzing the signature codes of known viruses and storing them in a virus pattern bank, then comparing the file or disk for specific virus signatures. More advanced heuristic or rule-based scanners look for particular behaviors that might lead to virus activity.

Another detection technique, called checksum, calculates a number based on the contents of the file. A change in that number may indicate that the file has been infected, though this technique can also cause frequent false alarms. And a disk-access monitor, a memory-resident utility or TSR that alerts the user to viruslike activity, can also produce annoying false alarms—caused by such unarmful activities as the creation of temporary or backup files by word-processing programs.

Whatever antivirus program is used, it is essential to keep antivirus software up-to-date. All major producers reside on CompuServe and post regular program updates and virus-definition files, which often contain the formulas and data needed to detect and even repair virus-infected files. "Recently we uploaded new definition files for the Junkie and Chill Touch viruses within a day," boasts Symantec's Perry. How often updates should be made depends on how often new programs or disks are loaded into a system. Goresky recommends monthly updates for most users.

Richard Levey, a wide-area network manager for Pace University in New York, has implemented a rigid antivirus program to protect his system. Besides using network software to protect executable files from altering, each server is automatically scanned at night for virus infections and every workstation is automatically scanned for boot-sector and memory-residing viruses when it's booted. He uses backup software that checks for viruses as well. "I have been responsible for the WAN for four years," he says proudly, "and during that time we have never been struck by a virus."

Don Dougherty, PC support manager for FileNet Corporation in Costa Mesa, California, developed a system of virus scanning that includes three different scan programs, including Frisk's virus detector Virstop as a TSR to scan all new files, McAfee's Scan on all files contained within any ZIP-compressed archive, and Frisk's F-Prot. He leaves nothing to chance, even scanning new CD-ROMs.

"All this still won't protect me," Dougherty says. Earlier this year, new hard drives on two corporate systems were infected with Michelangelo by a floppy disk installed by a service company. Because these were brand-new hard drives, there was no software on them to detect a virus. "It all goes to show that no matter how careful you are, it can still happen," he says.

## COMPUTING SERVICES



# Virus Finders, Foilers: Shareware and Other Program Files

The challenge of an ever increasing number of complex and sophisticated viruses has spawned a sizable mini-industry of programmers dedicated to disabling those strains as soon as they appear. Each group of antivirus programmers puts a slightly different set of tools and techniques to bear in the battle against the continual threat of viruses. As a result, many shareware and freeware versions of virus-scanning and -disinfection programs are distributed throughout CompuServe. Regular updates of other commercially available programs are distributed freely on the network as well.

## Intel Forum (GO INTELFORUM)

**LANDesk Virus Protect Test Drive**—Sample Intel's antivirus software for a 30-day trial period to detect PC viruses. Library 1, "LANDesk Products," VPTDK.EXE (1,253,271 bytes).

**Current Virus Pattern File**—Update your copy of LANDesk Virus Protect with this pattern file. Library 1, UP61.EXE (75,150 bytes). Note: Intel changes the file name with each updated version. If you don't find UP61.EXE, look for UP62.EXE.

## Mac Developers Forum (GO MACDEV)

**VirusRx**—Apple's VirusRx and documentation. Library 8, "Apple System Files," VIRRX.SIT (51,200 bytes).

## Mac New Users Help Forum (GO MACNEW)

**Disinfectant**—This new release of Disinfectant adds protection for INIT-29B, a second strain of INIT-29. Library 6, "Anti-Virus Tools," DISINF.SEA (176,000 bytes).

**Gatekeeper**—This version adds protection for the CODE-1 and MBDF-B viruses. Library 6, GATEKPSIT (251,008 bytes).

**Xmas Killer and Vaccine**—This file contains two HyperCard stacks for removing the Merry Christmas virus. Library 6, HCXMAS.SIT (53,398 bytes).

## McAfee Virus Forum (GO MCAFEE)

**VirusScan 9.28**—Scans PCs and LANs for computer viruses. VirusScan is continually updated as new viruses are discovered. Search Library 1, "McAfee Anti-Virus," using the file name SCN\*. \* to get the current version. Several add-ins for VirusScan are available, including a Windows front end (WSCAN), a TSR virus-

prevention program (VSHIELD), and an OS/2 scanner (OS2SCAN).

**ZipScan! for Windows**—Automatically scans for viruses inside ZIP files with the click of a few buttons. Requires McAfee's VirusScan, PKUNZIP, and VBRUN300.DLL. Useful utility for Windows 3.1. Library 2, "3rd Party Add-ons," ZIPSCN.ZIP (35,520 bytes).

**ZTech Terminus**—A shell program for checking inside ZIP files with VirusScan. Includes network support. Color monitor and mouse are options. Library 2, ZTEC75.ZIP (120,456 bytes).

**T-Rex Antivirus**—This is the freeware version of the antivirus program developed by Jurassic Park, Ltd. Library 3, "Other Anti-viral," TREX.ZIP (204,864 bytes).

**Anti-virus System Protection**—A versatile and easy-to-use antivirus program from Russia. The program includes a set of tools, including a disassembler to aid in research on viruses. The program can be easily upgraded by the user, since virus hunting and killing are performed using a parameter file. Library 3, AVSP.ZIP (127,236 bytes).

## NCSA InfoSecurity Forum (GO NCSAFORUM)

**AVScan**—A full file scanner from Germany, AVScan detects all instances of polymorphic viruses, scans inside files compressed by LZExe or PKLite, and offers network support. Library 4, "Virus Tools/Info," AVSCAN.ZIP (322,825 bytes).

**PCRx Windows**—This file includes the Windows scanner only of PCRx from Trend Micro Devices. A free virus calendar and booklet are included. Library 4, WINRX.EXE (159,653 bytes).

**Integrity Master**—An easy-to-use antivirus and data-integrity system. It includes a virus scanner with generic virus detection, complete data-integrity protection, and full CMOS protection. Library 4, I-MAST.ZIP (324,554 bytes).

**Hypertext VSUM**—This is a comprehensive encyclopedia of information about computer viruses, which contains descriptions, information about detection and removal, activation dates, and product-evaluation data. Library 4, VSUMX.ZIP (1,039,053 bytes).

**F-Protect**—F-Protect by Frisk software can scan whole disks as well as user-specified paths. It can be set up to scan all files or only executables, boot sector, and memory. Bootup protection and TSR capability are also available. Library 4, FPROT.ZIP (472,178 bytes).

**NetShield**—Provides real-time virus protection

for NetWare services. Supports NetWare V4.01 and NetWare for OS/2 V4.01. Library 4, 4NS160.ZIP (182,421 bytes).

**Virus Disassembly Tool**—This disassembly tool uses 8086 Assembly commands to examine viruses and how they work. Library 4, DIS86.ZIP (69,325 bytes).

**NCSA's Data Recovery Tools and Tutorial**—This file is packed with utility software to assist in the recovery of lost data. Library 5, "Disaster Recovery," DYD.ZIP (345,231 bytes).

## Symantec AntiVirus Products Forum (GO SYMVIRUS)

**SAM Virus Definitions**—This file includes new virus definitions for Symantec Antivirus Macintosh, including Init 29B. Library 2, "SAM AntiVirus Mac," SAMDEF.BIN (18,304 bytes).

**Norton AntiVirus Update Patch**—Use this program to update your Norton AntiVirus version 3.0, and enable it to detect the newest, more complex viruses. Library 3, "Norton AntiVirus," NAVUP.ZIP (1,155,157 bytes).

**Updated Virus Definitions**—After using NAVUP.ZIP to update your software, install this updated definition file to ensure Norton AntiVirus has current information on new viruses. Search Library 3 using the file name 30A1\*.ZIP to locate the newest version.

## Symantec CPS DOS Forum (GO SYMCPDOS)

**Central Point Anti-Virus Scan Only**—A free version of Central Point's Scan-Only Antivirus software that can detect more than 1,300 viruses. Library 4, "CPAVDOS," CPAVSO.ZIP (273,869 bytes).

**Microsoft Anti-Virus Signature File**—The latest antivirus signature file for Microsoft AntiVirus, part of MS-DOS 6. Library 4, DOSAV.EXE (30,613 bytes).

**Anti-virus Signatures Mac**—Includes the latest hexadecimal codes for Central Point AntiVirus for the Mac. Library 10, "From Our Tech Staff," 2.TXT (10,342 bytes).

## Symantec CPS Win/Mac Forum (GO SYMCPWIN)

**Central Point Anti-Virus for Macintosh Signature Files**—Besides new signatures, updated for Init 9403 and Init 29B, it contains signature files dating back to July 1992. Library 10, "Macintosh Products," MACSIG (29,696 bytes).

Dick Charles of Milwaukee has had two catastrophic virus infections. He uses a special keyboard emulator so that he can use his computer despite a disability that leaves him almost completely paralyzed. In his search for programs that work with the emulator, he acquired a virus that infected nearly every one of his floppy disks as well as his system.

"My reaction was to immediately buy the

best virus-protection software I could find and set up a procedure to avoid another disaster," he says. After a few years without another occurrence, he stopped checking for viruses, only to be infected again this year. "I now check every disk before I do anything, and run at least one of the three detection programs I have each day."

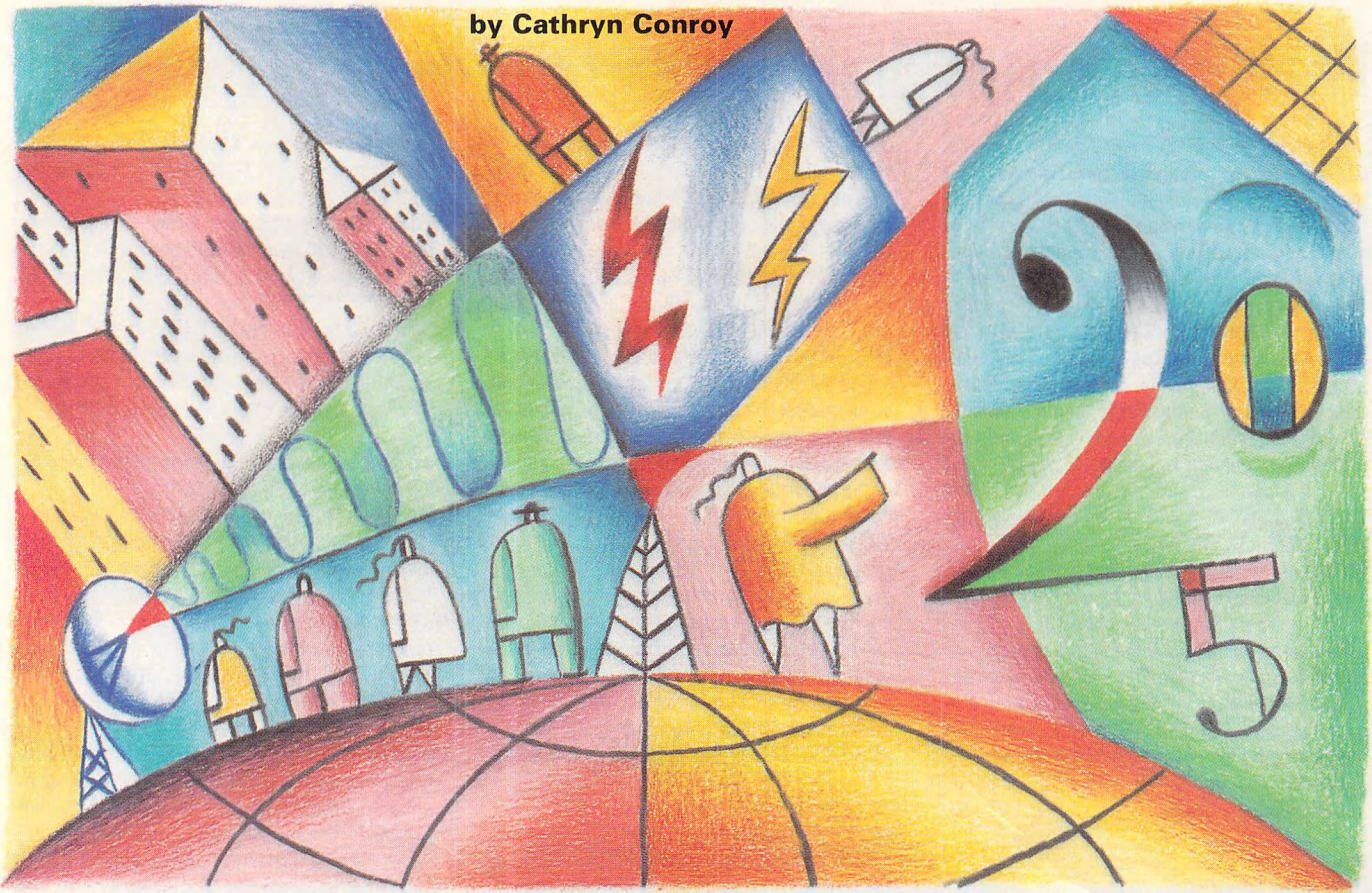
"Anyone who thinks viruses infect only

computers other than their own are in danger of a painful surprise," he warns. "Preventing infection isn't difficult and is well worth a few minutes daily." ☐

*Jan Smith is a freelance writer based in Jamaica Plain, Massachusetts. Her CompuServe User ID number is 76000.23.*



by Cathryn Conroy



# People, by the Numbers

## PERSONAL ENTERPRISE

### Where to GO

Business Demographics  
(GO BUSDEM)

Cendata  
(GO CENDATA)

Neighborhood  
Demographic Reports  
(GO NEIGHBOR)

PR and Marketing Forum  
(GO PRSIG)

Supersite  
(GO SUPERSITE)

US-State-County Reports  
(GO USSTCN)

Working From Home  
Forum  
(GO WORK)

**You may not want to make a move in business without the data that really "counts"—demographics.**

Demographics, the statistical study of human populations, provides small businesses with the critical information they need to stay ahead of the competition. Grasping the meaning behind demographic numbers helps savvy entrepreneurs make such integral decisions as where to locate a new store, which advertising media to buy, and how to best expand a business.

However, they don't get the whole demographic story by staring at lists of population numbers. "You have to understand how this information directly relates to your product or service. Figures can mislead. You also need to understand the reasons, the logic, and the rationale that underlie them," cautions PR and Marketing Forum section leader Bill Weylock, president of Weylock Associates Inc., a custom research firm in New York City for manufacturers, public-relations agencies, and not-for-profit organizations.

CompuServe offers five key sources of U.S. demographic information: Business Demographics, Cendata, Neighborhood Demographic Reports, Supersite, and US-State-

County Reports. Members use these resources for a variety of applications.

Debra Mathien and David Ovad, who own B.J. Electric Supply in Wharton, New Jersey, used Business Demographics to expand their client base. Their company is an electric wholesale distributor that sells primarily to electrical contractors and industrial and manufacturing accounts. When two of B.J.'s competitors in neighboring counties went out of business, Mathien turned to Business Demographics, business market analyses developed from U.S. census data, to plot the best strategy for winning their accounts.

Demographically, the competitors' counties were very different from their own. To quickly determine which county would warrant an immediate and aggressive sales approach, Mathien used the Business to Business report issued for each county. It identified how many people were employed in the construction and trade industries to which B.J. Electric sells, as well as the number of industrial, medical, and manufacturing employers.

"Using this and other information pro-

*Cathryn Conroy is senior writer of CompuServe Magazine. Her CompuServe User ID number is 70007,417.*



# Searching Cendata for Your Town (and Country)

The U.S. Census Bureau's Cendata offers hundreds of thousands of census and survey reports. It is a menu-based system beginning with a menu of 18 items, including such topics as Census Bureau Products, Services, and Contacts; What's New in Cendata; U.S. Statistics at a Glance (Including Economic Time-Series Data); Census and You (Selected Articles); as well as data on specific industries such as agriculture, business, foreign trade, manufacturing, and on selected countries organized by region. Cendata carries no special surcharges and can be accessed for the cost of connect-time only.

While most of the reports are broad-based, showing sweeping statistics from the entire United States as well as specific states or counties, two subfiles in Cendata offer detailed and focused information on individual communities and towns, including data on income, the labor force, housing characteristics, families, and individuals.

From the main Cendata menu select Option 18, "1990 Census Information," and from the next menu choose either Option 4, "Income, Education, Labor Force & Housing Characteristics (STF3)," or Option 5, "Persons, Families, Households & Housing Units (STF1)." Working through the menus, you can select counts for the entire United States, any state, county, or "place," the census term for communities. Choose the "Place" option and the system will take you through a series of state menus and, finally, a two-item menu that lists blocks of communities in a state in alphabetical order.

For instance, the menu containing STF3 data for the state of Maryland looks like this:

## **18.4.3.2.3—1990 POPULATION INCOME, EDUCATION, LABOR FORCE & HOUSING CHARACTERISTICS (STF3)**

**Places: Aberdeen Proving Ground CDP-Woodsboro town, Maryland**

- 1 Aberdeen Proving Ground CDP-North East town**
- 2 North Kensington CDP-Woodsboro town**

If you want census data for the town of Ellicott City, select Option 1. The next menu looks like this:

## **18.4.3.2.3.1—1990 POPULATION INCOME, EDUCATION, LABOR FORCE & HOUSING CHARACTERISTICS (STF3)**

**Places: Aberdeen Proving Ground CDP-North East town, Maryland**

- 1 Aberdeen Proving Ground CDP-Barclay town**
- 2 Barnesville town-Braddock Heights CDP**
- 3 Brandywine CDP-Cambridge city**
- 4 Camp Springs CDP-Cheverly town**
- 5 Chevy Chase CDP-College Park city**
- 6 Colmar Manor town-Discovery-Spring Garden CDP**
- 7 District Heights city-Ellicott City CDP**
- 8 Emmitsburg town-Friendsville town**
- 9 Frostburg city-Golden Beach CDP**
- 10 Goldsboro town-Hebron town**
- 11 Henderson town-Keedysville town**
- 12 Kensington town-Largo CDP**
- 13 Laurel city-Manchester town**
- 14 Marbury CDP-Mitchellville CDP**
- 15 Montgomery Village CDP-North East town**

For Ellicott City, select Option 7. Work your way through these menus until you reach the community of interest.

Data presented for each community in "Income, Education, Labor Force & Housing Characteristics" includes such information as a count of families, family type and presence and age of children, household income and its sources, race of householder, ancestry and citizenship, education and school enrollment, employment and working parents, marital status, transportation, veterans status, housing values, housing costs, and age of structures.

Data for "Persons, Families, Households & Housing Units" is primarily in table format, covering all persons, persons in specified age groups, persons of Hispanic origin, persons in group quarters, families, all households, owner-occupied housing units, renter-occupied housing units, and more.

—CC

vided by the state, such as new housing starts and the number of certified electricians, as well as the customer lists from the closed competitors, I was able to determine where we should send our sales representatives immediately," Mathien says. "It paid off almost 100 percent." The B.J. Electric sales rep called on customers within two days of the competitors' closings, snaring 45 new customers in just one month.

Similar demographic research methods are used by nonprofit organizations. Colonel Louis T. Dechert of Fort Worth, Texas, a retired U.S. Army officer, uses demographic information organized by county, state, and the United States in US-State-County Reports to help the Christian and Missionary Alliance nonprofit organization determine where to set up new churches. Dechert focuses his efforts on Texas, Oklahoma, Arkansas, and Louisiana, an area that has a population of more than 26 million and contains 11 of the 100 largest U.S. cities.

"The area is large. Detailed demographics assist us in doing as much as we can as effectively as we can," says Dechert, who is director of extension/church growth for the Alliance's southwestern district.

Using US-State-County Reports' economic, age, housing, education, ethnic, and geographical information about current and projected populations along with budget information, potential church sites are located and current sites can be better served. For instance, Dechert determined from his research that western Oklahoma is decreasing in population, a trend expected to continue through the year 2000. Also, the existing population is predominantly elderly. The Alliance has one extension church in the area. Rather than building new churches, it has used this demographic information to expand the work of the established church and focus its ministry on senior citizens.

"Demographics is about relationships: people, their institutions, their needs, their

natures, and their activities. Those who best apply an understanding of demographics will be able to accomplish the most," says Dechert.

While Business Demographics and US-State-County Reports offer the big picture, more targeted information can be found in Neighborhood Demographic Reports, which sorts reports by U.S. ZIP codes. When the Municipal Credit Union of Brooklyn, New York, developed its Affordable Housing Program to offer special mortgage-financing rates, it needed to identify qualified first-time home buyers. The first step in its direct-mail advertising campaign was to select New York-area ZIP codes where the credit union had a large number of accounts and where residents might be interested in purchasing a house.

Using Neighborhood Demographic Reports, Gerard J. Herrling, the credit union's vice president of product development and marketing, examined not only typical house-



# An Overview of Demographics Databases

CompuServe offers five U.S. demographics databases. The three CACI products offer specific reports in categories ranging from U.S. ZIP codes to Nielsen TV markets. Market Statistics' Business Demographics provides reports based on Standard Industrial Classifications, and Cendata contains direct U.S. Census data. Cendata is part of extended services and carries only hourly connect-time rates (+), while the others are surcharged products (\$) or are available with the Executive Option (E).

**Business Demographics** reports from Market Statistics are based on U.S. census information and are designed for business market analysis. Two types of reports are offered. The Business to Business Report includes information on all broad Standard Industrial Classification (SIC) categories, providing the total number of employees in each category for a designated geographical area. The Advertisers' Service Report offers data on businesses that constitute the SIC categories for Retail Trade. Each \$10 report breaks down the total number of businesses for each specified geographical area in relation to company size. Both reports can be requested by ZIP code, county, state, metropolitan area, Arbitron TV markets, Nielsen TV markets, or the entire United States. \$

**Cendata** offers U.S. census information directly from the U.S. Census Bureau, allowing you to spot patterns, trends, and correlations that make for informed decisions. This menu-based system offers several hundred thousand records culled from the censuses and surveys conducted by the Census Bureau for the entire United States, as well as specific states and counties, on such topics as agriculture, business, construction and housing, foreign trade, governments, manufacturing, population, and genealogy. Economic

time-series data from the U.S. government is published on Cendata within an hour of its release to the media, offering users instant access to timely information on current economic developments. In addition to census reports, Cendata features explanatory articles that help make sense of the numerical data. +

**Neighborhood Demographic Reports** from CACI Inc. provide basic demographic information by U.S. ZIP code. Four neighborhood reports are available: Demographics, Civic/Public Activity, Gift Idea, and Sports/Leisure Activity. Each report costs \$10. \$

**Supersite** from CACI allows you to narrow your search to specific and compact geographical areas. The reports are offered for the entire United States and every state, county, metropolitan area, Arbitron TV market, Nielsen TV market, place, census tract, minor civil division, and ZIP code in the country. Demographic reports are provided, covering general demographics, income, housing, education, employment, and current- and projected-year forecasts. You can focus your search on one specific geographic area or enter more than one for a consolidated market report. Included are Demographic Reports based on the 1990 Census Profile, Update and Forecast Data, Purchase Potential Reports, as well as ACORN Target Marketing, which analyzes and profiles consumers based on the type of residential area in which they live. Prices for reports range from \$25 to \$45. \$E

**US-State-County Reports** from CACI offer demographic information for the entire United States, any state or county, and include such data as total population, number of households, average age, average household income, type of households, occupations, race, and more. Each report costs \$10. \$



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hold information such as age, income, and occupation, but also the percentages of rental dwellings versus home ownership and the average value of houses. Selected ZIP codes were then cross-referenced to the credit union's customer information file, and a direct-mail campaign offering the special financing to first-time buyers was launched.

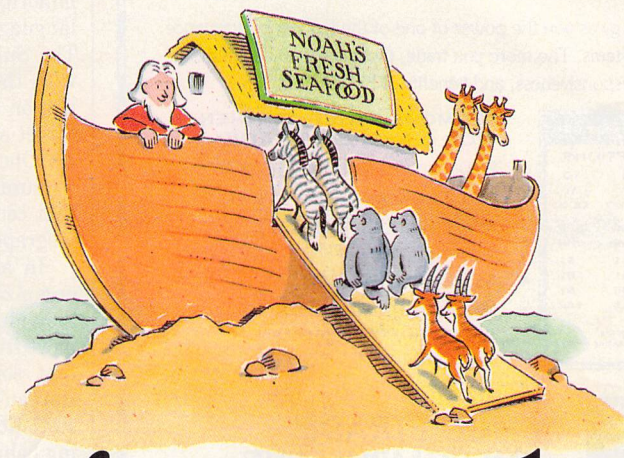
"With Neighborhood Demographic Reports," says Herrling, "I was able to select only those particular geographic areas that matched our account-base specifications," a technique that offered significant cost savings over commercial demographics packages that would have run into several thousand dollars in expenses.

If members need to narrow their searches even more than Neighborhood Demographic Reports allows, Supersite offers this ability, providing current information as well as forecasts for income, housing, education, and employment for specific neighborhoods. Michael Anderson used Supersite when regular census reports sorted by ZIP code were too broad because it allowed him to define his own "neighborhoods" by grouping several census sub-tracts together.

A volunteer with Kids in Common, a Santa Clara, California-based nonprofit organization, Anderson works with the group's immunization project to ensure that 100 percent of U.S. children are fully immunized by age two. The first step in this campaign was to run a pilot project whereby all children in a needy neighborhood would be immunized. As the manager of corporate information



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systems for ESL Inc., Anderson volunteered his professional skills to coordinate the immunization project's data-tracking effort for selecting such a neighborhood.

Using Supersite, Anderson was able to compare such demographic information as total population, average household size, number of children under five years old, minority representation, English as a second language, median income, and housing type. The Supersite reports were then compared with the public health department's statistics on illnesses and prenatal care to help target six neighborhoods for detailed analysis. One was chosen as a pilot project for the immunization-saturation campaign, a choice that could not have been made without demographic information.

In addition to companies and nonprofit organizations, demographics can also benefit individuals and families, especially as they move from one location to another. One of the best sources for this is the U.S. Census Bureau's Cendata, which offers census data, statistics, and articles explaining the meaning behind the numbers.

West Chester, Pennsylvania-based attorney Jerry L. Soucie provides legal assistance to those moving to the greater Philadelphia area. In addition to serving as a real-estate attorney doing title searches and assisting with real-estate negotiations, Soucie provides his clients with information on local schools, neighborhoods, housing prices and patterns, crime statistics, and other information real-estate agents do not provide.

Philadelphia's size often overwhelms newcomers with the choices of neighborhoods and schools. "Census data provides a method to narrow the community and neighborhood search," Soucie explains.

Using Cendata, which he chooses because its menu-based system is easy to search as well as affordable, Soucie profiles the community in which the client currently lives, assessing income levels, employment patterns, housing prices, and more. He then compares that area with Philadelphia neighborhoods. Using objective census criteria rather than the subjective opinions of residents, he is able to tell clients if the new neighborhood is similar to or more or less affluent than the one from which they are moving—"information that greatly assists a client to narrow the area he is looking at to buy a new home," says Soucie.

CompuServe's various demographic products help members make informed decisions. Whether moving to a new area or marketing a new product, they can quickly access the relevant information. According to Laura Clampitt Douglas, leader of the Working From Home Forum's "Getting Business" section and co-author of *Getting Business to Come to You* (Jeremy P. Tarder, 1991), "Demographic information is essential in today's business world. It is the starting point for any good research."

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Be selective when reentering the workforce: Jack and Elaine Wyman

## Call Them "Elderpreneurs"

### Seniors invest in second careers for thriving retirements.

Life after retirement can range from hohum to b-o-r-i-n-g, especially if you are male and have an entrepreneur's personality and workaholic tendencies. The solution? Consider a second career.

"Entrepreneurs are the least likely to be satisfied with retirement," says Jack Wyman, author of *Retired? Get Back in the Game!*, profiles of 37 senior citizens who successfully reentered the workplace after age 65 (Doer Publications, 1994). A twice-retired entrepreneur himself, Wyman sold his San Francisco advertising agency in 1983, moved to Scottsdale, Arizona, and "spent a lot of time looking at my watch and wondering, Aren't I supposed to be somewhere?" He felt devastated to know that he wasn't.

Such a reaction is typical, says Duane Brown, a certified career counselor, professor of education at the University of North Carolina, and author of *How to Find Your New Career Upon Retirement* (VGM Career Books, 1994). "Men in particular have trouble retiring to a life of leisure," he explains. "Their identities, more than women's, are associated with work. Of course, this is changing very quickly."

Launching a small business has been a way of preserving identities for many of the 3.6 million seniors currently in the workforce. However, Wyman and Brown urge would-be entrepreneurs to proceed with caution. The romantic notion that "you should do

what you love and the money will follow" is fine, says Brown, as long as there's a market for what you love. The safer strategy is to plan a spin-off career based on what you know, even if what you know is as esoteric as teaching philosophy to college students.

"Unlike most businesses, I didn't start with an organized plan," admits Walter Coole, a retired philosophy professor, former executive secretary of the Vancouver (British Columbia) Home Based Business Association, and an active CompuServe member. "I blundered into several small-niche opportunities and then decided to write a plan, open a business bank account, apply for a tax number, and get a municipal license." The result is Scaramouche: Hacker/Factotum, a philosophy service business, which helps clients set goals, identify objectives, and solve problems through systematic analysis—one of only four he estimates to be in operation in North America. Scaramouche began as a sideline, eventually nosed out the teaching job, and now offers clients around the world a variety of management services that vary from planning seminars to assisting companies with cross-border trade programs.

Coole and Brown agree

that too many seniors assume that lucrative careers as consultants await them after they accept their gold watches. "They think that because they have worked they have unusual expertise," says Brown. "Well, maybe they do, but they may underestimate what it takes to market the expertise."

Coole is more skeptical than Brown of such aspirations, saying it's a "cruel myth" that seniors can easily set themselves up as consultants and sell their experience and wisdom. "The fact is, this is a fast-moving world," he says. "By the time your new business cards are printed, your knowledge of your trade or craft could be obsolete. You have to keep current with new developments."

He endorses the use of "enabling technologies"—computers and telecommunications—as an effective way of keeping current. He warns retirees to be wary of circling sharks, those "friendly folks who conduct free seminars and tell you how to make millions from your kitchen table." As an alternative or supplement, he suggests "homepreneurs" might tap online resources such as the Working From Home Forum and the PR and Marketing Forum in search

### PERSONAL ENTERPRISE

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**GO RETIREMENT**

Working From Home  
Forum  
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# Enter the Retirement Living Forum

With a new name, an expanded mission, and a SPRY staff, the Retirement Living Forum—previously the Seniors Forum—has stepped up its services to an age group that is growing six times faster than the rest of the population and will outnumber children in the United States within four decades.

"We want senior citizens to know there is expertise online to help them take critical steps in many phases of their lives," says Jeff Finn, sysop of the revamped forum and executive director of Setting Priorities for Retirement Years, a nonprofit foundation based in Washington, D.C.

Finn and his staff hope to empower seniors with timely information and, at the same time, preserve the warm atmosphere that characterized the Seniors Forum since its launch more than a year ago. They envision their audience to include current seniors, soon-to-be seniors, and children of seniors who are involved in caring for their parents and guiding their parents' decisions.

Among the agencies recruited by Finn to stock the forum's libraries with pertinent files are the Social Security Administration; the U.S. National Institute on Aging; the U.S. National Heart, Lung and Blood Institute; and the American Bar Association.

Additional contributors will be arriving over the next few months, says forum wizop Victoria Chronister, who will alert members to the arrivals via News Flashes.

Finn hopes the information exchange will go beyond library files to include questions posted on the message board and answered by agency experts. He also foresees quarterly conferences with guests from Medicare, the Pension Rights Center, the U.S. National Center for Financial Education, and the Social Security Administration. "People will have the opportunity to ask questions of real people and get their answers *fast*," he emphasizes.

The forum's take-charge attitude toward aging is evident in such sections as "Going & Doing," "Housing," "Money," and "Productive Aging." A holdover from the past is the popular "Town Square," a central gathering place for forum members to swap memories and experiences.

"We're interested in people continuing to share stories about their everyday lives," says Finn. "But we hope they also see the forum as an opportunity to share experiences related to housing, finance, health, retirement, and other issues that matter a great deal to them."

—HGM

of mentors, advisers, and colleagues. Other helpful resources are the articles contained in Section 2 ("Good and Bad of Entrepreneurship") of Information USA. Among the most useful are "Six Reasons: Time to Start a Business," "What Entrepreneurs Don't Need," and "Choosing the Right Business."

Of course, some retirees neither are interested in full-time work nor want their second careers to be clones of their first. They're ready for change and prefer it in small doses.

Math teacher Betty Clay, a sysop in the Retirement Living Forum, admits that if money had been her primary objective, she would have launched a tutoring service after retiring from the classroom in 1987. Instead, she combined two extracurricular hobbies—computers and writing—into an avocation only loosely linked to her profession. She had "discovered" computers years earlier when she and her colleagues had been asked to devote six weeks of the math curriculum to computer programming. Several small problems existed: computers were new to the classroom, teachers weren't experienced users, and no instructional materials were available for students. Clay bought a machine, quickly mastered its use, and wrote a workbook that was adopted by the school district. Next came a computer column for the city newspaper, followed by assignments for several technical journals.

"By the time I retired from teaching," says Clay, "I was writing for five or six magazines"—not for the money, but for fun. "The things

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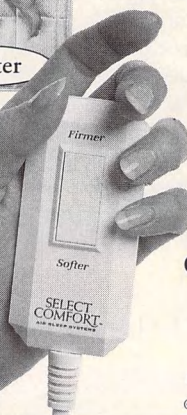
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we do as spare-time activities are far more likely to give satisfaction than to bring income," she says.

Even if money is a goal, retirees should guard against trading their old rat race for a new one. Author Wyman urges senior entrepreneurs to be selective when building a second career and incorporate only the best aspects of their first occupation. He speaks from experience. After retiring from advertising once, he and his wife, Elaine, reentered the business and

quickly fell victim to all the headaches of the past. This time, however, they found their tolerance level had diminished. They no longer wanted to deal with problems related to difficult customers and an expanding staff.

"We didn't want the overhead anymore," says Elaine.


"We didn't want to manage 30 employees." Again, they retired to Arizona, but this time they took with them a handful of favorite clients whose advertising needs they could service comfortably from home. "Be fussy,"

## PERSONAL ENTERPRISE

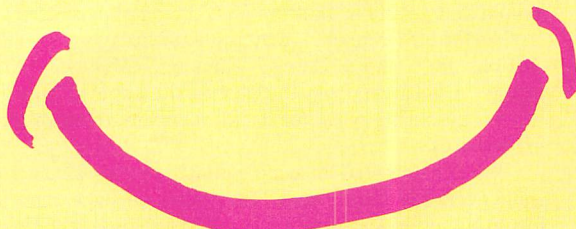
the Wymans conclude.

Brown suggests that a retiree interested in starting a new business should volunteer to work several months for a company similar to the kind he or she wants to launch. "You shouldn't do anything that you haven't seen, smelled, tasted, and felt," he says. After such an internship, the entrepreneur needs to ask several key questions: Where am I going to locate this business? Should I rent space? How am I going to market my product or service? Do I have four months of operating funds on hand to handle cash-flow problems? Is my business plan fully developed?

Brown sees today's senior entrepreneurs divided into two categories. The more traditional model is sixty-something, has energy to spare, cash to risk, and is motivated by a need for self-fulfillment and camaraderie. The second variety is 10 years younger, has children in college, has a mortgage on his house, and—"because of downsizing, restructuring, and the other euphemisms we use for laying off people"—is an entrepreneur by necessity. In either case, a second career can mean a second chance to do what the entrepreneur should have done in the first place—even if the new career stipulates certification, accreditation, licensing, or an additional college degree or two.

"The so-called older worker shouldn't rule out careers that require extra preparation," insists Brown. Then he offers a favorite example: a 59-year-old Philadelphia woman who decided she wanted to be an attorney after her children had grown up and left home. "She graduated from law school three years ago and was promptly chosen that city's Young Lawyer of the Year." 

*Holly G. Miller is an adjunct professor of communication at Indiana's Anderson University, travel editor of The Saturday Evening Post, and author of 12 books. Her CompuServe User ID number is 70007,2345.*



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STAY ON TOP

## Sunshine State Central

Issues of interest to senior citizens take on a Florida spin in the "Seniors/Snowbirds" section and library of the Florida Today Forum. Articles uploaded to Library 9 from the Space Coast newspaper deal with such topics as living on a fixed income, investing in vacation real estate, and crunching numbers to determine retirement needs.

Section visitors shouldn't be put off by the Brevard County connection. The newspaper serves central Florida, but the online section reaches beyond area residents and winter transplants (snowbirds). Forum leaders see the section as a "salon or coffee shop" where North meets South and seniors discuss health care, cost of living, and the best places to spend the retirement years, says Mark DeCotis, section sysop and reader-services editor of *Florida Today*.



# 5



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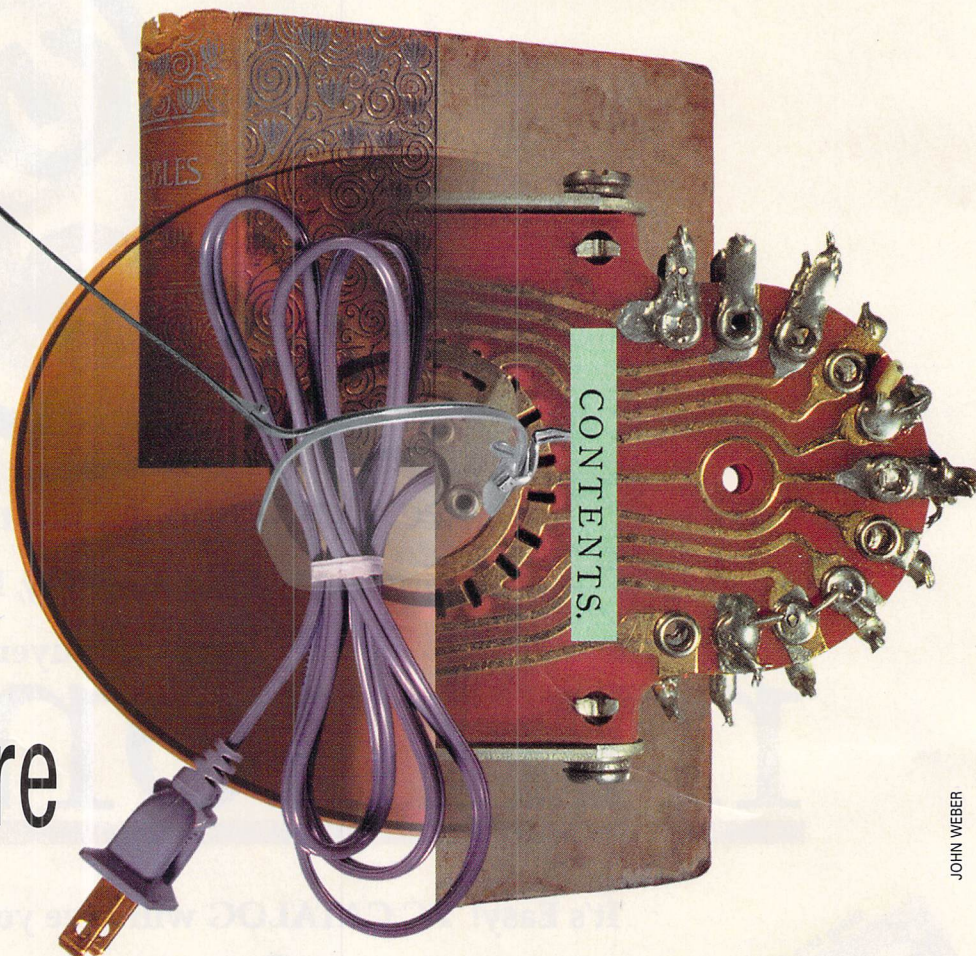


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### Future reading may entail the exploratory and entertaining "hyper"-ness of electronic books.

As an information-delivery platform, the printed book has a lot going for it. It's cheap, portable, durable, lightweight, and environmentally friendly. It also holds enough information to keep most readers occupied for hours, days, or even years on end. Yet despite the book's many positive attributes, everyone from hardware designers and software developers to publishers and readers is looking for a better, more high-tech replacement.

As we enter the final years of the twentieth century, the book is facing serious competition for the first time since Gutenberg told the monks to pack away their quills. Portable electronic readers, CD-ROMs, online services, and other emerging technologies can possibly render the printed book as quaint as a magic-lantern show or rotary-dial telephone. *Forbes* magazine recently reported that in 1993, for the first time, as many CD-ROM encyclopedias were sold as the printed kind. And, equally ominous for fans of words on paper, 1994 marks the first year in this century

without a Sears, Roebuck mail-order catalog—the end of a 97-year tradition.

Just as paper-based books come in different styles—hardcover and softcover, coffee-table and pocket-size—electronic publishers are also experimenting with different formats. Companies such as Franklin Electronic Publishing Inc. of Mount Holly, New Jersey; Park Ridge, New Jersey-based Sony Corp.; and Apple Computer Inc. of Cupertino, California, are producing electronic-book readers and personal digital assistants (PDAs) that display text stored on disks and/or plug-in memory cards. Other publishers, including the Voyager Co. of New York City and Broderbund Software Inc. of Novato, California, are producing CD-ROM electronic books, designed primarily for desktop computers. Even the venerable floppy disk is playing a role in the electronic-book market, thanks to sophisticated data-compression technologies. Eastgate Systems Inc. of Watertown, Massachusetts, is one of several publishers offering floppy-based electronic books, such as Michael Joyce's *Afternoon, a Story* and Stuart Moulthrop's *Victory Garden*.

In addition, numerous CompuServe fo-

*John Edwards is a contributing editor of CompuServe Magazine. His CompuServe User ID number is 70007,412.*



# Creating an E-Book Is Not So E-Z

Electronic books are the wave of the future. But budding electronic-book publishers, lured by the field's readily available technology and modest start-up costs, often find themselves crashing into the surf instead of riding the crest to success. The reason: lack of preparation.

Dave Riley, CEO of NeoSoft Corp., a Bend, Oregon-based publisher of electronic-book authoring tools, notes the importance of identifying the target audience before beginning work on any electronic publication. He says novice electronic-book publishers should ask themselves the following questions: What types of computers and operating systems are the readers likely to have? What type of video cards and monitors will they have? How much memory will be required? Is any special hardware needed to view the publication? "How you answer these questions will limit or expand your potential audience," states Riley.

Finding an authoring tool that matches the requirements of the project at hand as well as the limits of the publisher's abilities is crucial. "If you don't have any experience with programming, you might be more successful if you choose a package that doesn't require the use of a complex scripting language," says Riley, who also points out that some authoring tools require publishers to pay a royalty for every distributed copy of an electronic book. "Some marketing methods, such as shareware, might be incompatible with such a policy."

David Rothman of Alexandria, Virginia, an author of both conventional and electronic books, notes that the biggest risk for electronic self-publishers is the same as for authors of any variety: not getting paid enough for their time. "In most cases the audience isn't there yet. Computer screens are not as easy to read from as

they will be in the future, and there is no central catalog readers can use to find just the right e-books." To minimize the financial risks involved with CD-ROM, memory-card, or disk production and distribution, Rothman suggests publishing online. "You can reach many more people and benefit from much more feedback along the way," he says.

Dr. Ronald Albright, founder and director of the Digital Publishing Association, a Birmingham, Alabama-based trade association of electronic publishers, says that no matter which medium is used, the novice electronic-book publisher must make his version surpass a printed version. "You cannot succeed simply by putting ASCII text in a computer-readable form. Something must be done to enhance the material as only computers can."

Dave Riley adds, "Your chances of success will be greatly increased if your publication is visually appealing and well written." He suggests having an expert proofread the text for grammatical and spelling errors. "If you don't have any experience with layout and design, consult with someone who does." He notes that members in several CompuServe forums, including the Multimedia, Literary, CDROM, ASP/Shareware, and Scripting/Hypercard forums, can provide key information aspiring electronic-book publishers need to get their projects off the ground.

"The most important advice I could offer an electronic writer is simple," says Mark Bernstein, chief scientist at electronic-book publisher Eastgate Systems Inc. of Watertown, Massachusetts. "Write well, write about things that really matter to you and to your readers, and write what has never been written before and what nobody else can write as well."

—JE

books offer ready-to-read "hypertexts"—electronic books that interact with their readers, rather than page-to-screen electronic repackagings of printed books.

No matter the medium, electronic books pose opportunities and challenges for authors and readers. Larry Blasko, an electronic-book author and the Associated Press's computer columnist, says that new technologies are leveling the publishing playing field and making it easier for novices to become author-publishers. "Book publishing is an industry involving huge equipment, and the entry costs are enormous. Electronic publishing, by contrast, can be done by anyone who has a few PCs," says Blasko, who lives in Summit, New Jersey.

Blasko, whose electronic novel *Vamp!* won the Digital Publishing Association's Digital Quill Award for Best Fiction in 1992, likes the control the medium provides. "I'm the author, artist, composer, and publisher, but surely not a Random House," he states. "The biggest consideration in an e-book is the same as in any other book: the story or content. Hypertext delivers reference content more effectively than does paper. For fiction, the ability to add graphics and sound at any point in the story gives a book writer some of the tools of a moviemaker."

For readers, a top-notch electronic book functions as an interactive environment, says Frank Catalano, founder of Sumner, Washington-based Catalano Consulting, which specializes in marketing strategies for

firms working with interactive technologies. Unlike a printed book, which is usually read from beginning to end or in short spurts in order to find a point of reference, electronic books can lead readers in unique and potentially mind-expanding directions. "Electronic books can provide hyperlinks to related information or graphics and let someone explore a subject by areas of personal interest without flipping pages or referring to an index," says Catalano, who often visits the Multimedia Forum.

But electronic books can do even more. Many hypertexts take their readers on mind- and eye-bending trips that turn displayed text into a kind of performance art. For example, science-fiction author William Gibson's *Agrippa* (Kevin Begos Publishing, New York) is a disk-based book that transforms itself into gibberish once it has been read. On the other hand, Judy Malloy's *The Name Was Penelope* (Eastgate Systems, Watertown, Massachusetts) is never the same work twice. The book, which recounts a fictional woman's "memories," automatically reshuffles itself each time it is read. Catalano believes that interactive references and text-tricking electronic novels are only the harbingers of entirely new forms of publishing artistry. "Expect to see some of the highly hyped technologies merge to help make the electronic book more of a 'book that you live in,'" he says.

One current electronic book that makes its readers a part of the literary environment

is Stuart Moulthrop's disk-based *Victory Garden*, a collection of stories concerning people and events during the Gulf War. It has no beginning or end, and several different narratives run concurrently: readers can click on words in the text to move between various story threads, allowing one to pick up slices of information as if hearing the latest gossip from a friend or neighbor. Readers can also program the computer to automatically control the narrative's flow.

Robert Kendall, a Cranford, New Jersey-based electronic author and poet active in the Cyber Forum, notes that reading a hypertext book is very different from browsing through a conventionally printed work. "The nonlinear nature of hypertext brings it closer to our experience of the real world," he says. "In a hypertext novel, you can roam freely through the literary terrain, uncovering information about events and people a little at a time, often in haphazard ways."

In the unsettling CD-ROM *Freak Show* (The Voyager Co., New York), the narrative is supplied by Tex the Barker, who introduces readers to some of life's more unfortunate creatures, such as Jelly Jack the Boneless Boy. The electronic book is based on the music of the Residents, a San Francisco-based cult rock band, and features Pickled Freaks, a historical gallery of sideshow oddities. In a simulation of a real-life carnival visit, *Freak Show* readers can settle for the barker's palaver or sneak past the tent to visit the freaks in their trailers. Many of the



encounters are disturbing, as the freaks reveal their unique peculiarities and proclivities. Kendall compares the introduction of characters in electronic books such as *Freak Show* to meeting people in the real world. "Real life, after all, is nonlinear and interactive, not linear and static," he says.

But Bill Wiest, a London, Ontario, Canada-based electronic-book author, warns that hypertext can be a dangerous tool when placed in the wrong hands. "Hypertext structure affects a narrative positively or nega-

tively. In systems in which context is not well maintained, hypertext structure is disorienting for the reader."


Other electronic-book experts believe the field still needs to make significant strides in both portability and usability before it can hope to seriously compete with printed books. Janet McConnaughey, the Literary Forum's assistant sysop, points out that no rational person would read an electronic book while falling asleep, riding the

subway, or walking through a sleazy neighborhood or "other places where an expensive piece of electronic equipment might be leading one's fellow into too much temptation." Frank Catalano describes the electronic book's shortcomings even more succinctly: "They're expensive, they're fatiguing to read onscreen, they're not highly portable, and they electrocute you if they fall into the bathtub while you're reading them."

Despite their shortcomings for everyday use, electronic books are starting to make a significant impact in certain vertical markets. Portable computers and handheld book readers are allowing physicians and nurses to retrieve key information at a patient's bedside. Portable electronic books also allow architects to review plans on-site and lawyers to carry a law library right into the courthouse. In education, CD-ROM-based encyclopedias—such as Microsoft Corp.'s *Encarta* and Compton's *Interactive Encyclopedia*, from Carlsbad, California-based Compton's NewMedia—are bringing information to life with video and sound clips that augment static text and graphics. As the electronic-book field continues to mature, publishers are beginning to zero in on specific topics. Best-selling titles such as Microsoft's *Multimedia Beethoven* and *Complete Baseball* are proving there is a wide acceptance for electronic titles that target narrow interests.

In *The Cat Came Back* (Sanctuary Woods Multimedia, San Mateo, California), multimedia CD-ROM technology is used to teach kids aged seven to 11 how to read and speak in English, French, and Spanish. Based on a popular children's book and song, the software follows the exploits of a pesky yellow cat that invades a house and never leaves, despite the homeowner's best efforts. Besides presenting the story in animation, text, and spoken words, *The Cat Came Back* draws its young readers directly into the narrative by allowing them to record and play back their voices. According to Sanctuary Woods, the technique is designed to encourage children to try out new words or sing along to the story's soundtrack. The company notes that the software reinforces learning by making the educational process fun as well as active and participatory.

While the education market primarily focuses on kids, Blasko notes that electronic books can appeal to users of all ages. "A lot of my mail comes from seniors, who are eager to explore this new world—and have the time and money to do it."

"We live in an age where the audience expects more than the characters on the page," observes Blasko. "It's the difference between reading Shakespeare and seeing his work performed. Electronic books allow authors to bring a stage into the lap of each and every reader." 

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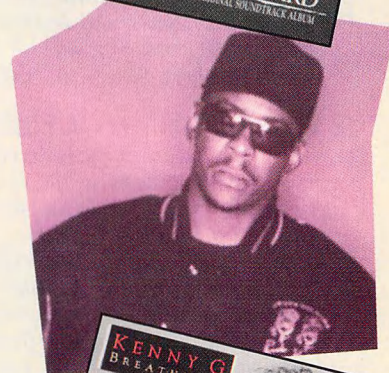
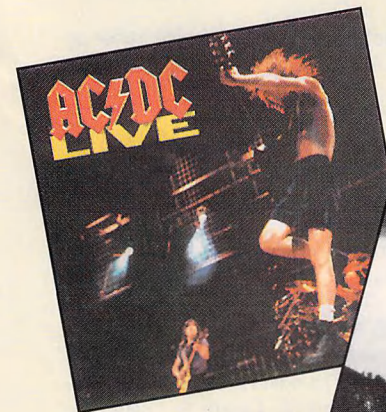
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# Reading Ahead: E-Books and Authoring Programs

Read a good electronic book lately? If not, you can delve into the libraries of numerous CompuServe forums to find titles that will amaze, intrigue, amuse, or instruct you. You'll also discover key authoring tools that will help you create the Great American Electronic Novel, textbook, or reference guide.

## CDROM Forum (GO CDROM)

**CDW21.ZIP**—A shareware CD-ROM authoring tool for CD-WO technology. Library 8, "CDROM Production," CDW22.ZIP (204,932 bytes).

## Cyber Forum (GO CYBERFORUM)

**The Hacker Crackdown**—An electronic version of the popular hardcover book. The text looks at the world of hackers and cyber-crooks. Authored by Bruce Sterling. Library 10, "CyberLit/Zines," HACKER.ZIP (274,853 bytes).

**"It All Comes Down To"**—A DOS-interactive video poem by Robert Kendall. The composition uses the computer as the medium, rather than the printed page. The poem utilizes graphics, animation, and interactive elements to bring its text to life. Library 10, SOFTPO.ZIP (219,696 bytes).

## Education Forum (GO EDFORUM)

**The Amazing Spectacular Ordinary Bottle**—A GIF graphics file that shows five scenes and the main character from the Interactive Literature book *The Amazing Spectacular Ordinary Bottle*. The electronic book is published by Visionary Media Inc. Library 3, "Edtech/Multimedia," VM3D.GIF (157,497 bytes). (Note: Members can also access Visionary Media files in the Computer Art Forum's [GO COMART] Library 16, "Visionary Media.")

## HP Handhelds Forum (GO HPHAND)

**HyperX**—A hypertext utility with a built-in PCX file viewer for the Hewlett-Packard 100LX handheld computer. The software uses ordinary text files, which can be prepared in the 100LX's *Memo* editor. Library 11, "100LX/200LX General," HYP100.ZIP (86,256 bytes).

## IBM Applications Forum (GO IBMAPP)

**Writer's Dream**—An easy-to-use program designed to help novice electronic publishers create their first book. The software supports up to 100 chapters with PCX graphics. Library 14, "Elec. Pub.," DREAM4.EXE (208,829 bytes).

**StoryMaker+**—An authoring tool for creating and reading EGA multimedia storybooks. The program includes a graphics editor for developing graphics and animation. Library 14, STORYM.ZIP (348,570 bytes).

## Literary Forum (GO LITFORUM)

**"The New Testament"**—A short story by Karen J. Bunch focusing on small-town life as seen through the eyes of a laundromat attendant. Library 6, "Fiction," LAUNDR.KJB (23,164 bytes).

**Neon Buddha**—The first chapter of a novel by Christopher Johnson. The book looks at an American scam artist who becomes involved in the politics of Burma. Users can obtain the entire novel directly from the author. Library 6, NEON1.CJ (26,420 bytes).

## Multimedia Forum (GO MULTIMEDIA)

**DeskTop Adviser**—A hypertext authoring and delivery system. The easy-to-use DOS tool allows publishers to create and distribute online documents in hypertext form. The software supports three navigational modes. Library 11, "Hypertext/Documents," DTA20A.ZIP (309,461 bytes), DTA20B.ZIP (342,185 bytes).

**Tutorial Writer 4.1**—An interactive multimedia authorware application for Windows. The program lets users develop tutorials, electronic documents, slide shows, and more. Users can add hypertext, voices, graphics, music, and other features. Library 11, TW41.EXE (539,388 bytes).

## Newton/PIE Forum (GO NEWTON)

**Armchair Episode Guide to *Star Trek: The Next Generation***—A Newton book that provides reference material on the popular TV series. Library 8, "Newton Packages," ARMCHR.ZIP (64,157 bytes) or ARMCHR.SIT (65,536 bytes).

**Newton Book of CompuServe Numbers**—A Newton book of CompuServe access numbers in the U.S. and Canada. Library 8, CISPPO.ZIP (38,217 bytes) or CISPPO.SIT (38,912 bytes).

**The Unofficial Acronym & Emoticon Directory**—A Newton book of acronyms and emoticons commonly used online. Library 8, ACREMT.SIT (12,032 bytes).

**The Federalist Papers**—A Newton book of the famous commentaries on the U.S. Constitution. Library 8, FEDERA.SIT (629,888 bytes).

## Palmtop Forum (GO PALMTOP)

**War of the Worlds**—An electronic version of H. G. Wells's famous work. The software was compiled by Project Gutenberg, an Urbana, Illinois-based venture that transfers public-domain books into ASCII form. Library 17, "Miscellaneous," WARW10.ZIP (151,767 bytes).

**The Prisoner of Zenda**—An electronic-book version of the classic novel, compiled by Project Gutenberg. Library 17, ZENDA1.ZIP (130,194 bytes).

## Scripting/Hypercard Forum (GO MACHYPER)

**DadaPoet**—An electronic book that creates an avant-garde poem every time the user hits a Make Poem button. The poem's text is drawn from material stored in the Macintosh's clipboard. Library 6, "Reference Stacks," DADA.SIT (11,392 bytes).

**Mythology HyperTextBook**—Demo of a Macintosh hypertext book that describes the characters and events of Greek, Roman, and Norse mythology in detail. Also gives a brief look at Egyptian, Babylonian, and ancient American myths. Library 6, MYTH.SIT (139,136 bytes).

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# Animal Rights and Wrongs

## ► Picking a pet means matching the creature with your own lifestyle.

Victor Angle was tired of fighting the weeds in his backyard. Then he had a great idea. He adopted a pair of nanny goats, figuring they could just *nibble* the yard clean.

His plan worked beautifully—for about five minutes. That's how long it took Miss Honeysuckle and Miss Magnolia to discover his prized rosebushes. And later, there they were, capering atop his in-laws' Chevy Nova, merrily munching its new vinyl roof.

Angle, of Chester, South Carolina, decided to give the goats to a friend on a farm. For city dwellers, he says, pet goats are like measles: "You'll only have them once."

He's not the only one who learned the hard way the importance of selecting the right pet. "People usually get pets with very good intentions, but often find they don't want them or can't keep them. People need to understand what's involved *before* they bring one home," says Kate Rindy, director of overpopulation issues for the Humane Society of the United States.

Too often, adds Martha Ashley, operations manager for CompuServe's Pets/Animal Forum, today's trendy pets, such as hedgehogs or Easter bunnies, become tomorrow's homeless animals. A pet should be a long-term commitment, she says, and pet owners who take the time to study their care and behavior before getting one can spare themselves frustration and heartache.

Ask Barbara Farron, of Springfield, Virginia, whose



GARRY BURDICK

Long Islander and basset hound paired via rescue network: Plummer and Watson

family bought an iguana. K'Ehleyr—a Klingon name, she explains—turned out to be feisty. "We didn't realize that many iguanas are caught in the wild and are traumatized by callous treatment," she says. "K'Ehleyr was one that couldn't forgive people for what had happened." After seeking advice in Section 6 of the Pets/Animal Forum, "Reptiles/Exotics," she learned that captive-bred reptiles tend to make healthier, friendlier pets. K'Ehleyr proved so troublesome that eventually the family gave him to a breeder.

So how does one find the right creature to care for? Consider several questions, Ashley says:

How long am I away from home each day? Someone who can't set aside a couple of hours a day for exercise, grooming, and other care may not make a good dog owner.

If I get a reptile, would I be comfortable feeding it live crickets or mice?

Can I handle finding cat hair all over the house?

Would a squawking macaw disturb the neighbors?

Is anyone in my family allergic to pets?

Would a frisky youngster or an older, calmer animal do better at my home?

But selecting the type of animal is only the first step, says Brian Kilcommons, sysop of Time Warner's Dogs & Cats Forum. Selecting the proper breed is also important, since breeding provides clues to how the pet will behave. "If you get a Labrador retriever, don't be surprised if it picks up everything in its mouth that isn't nailed down," Kilcommons says. Working breeds, such as rottweilers, are assertive and often too difficult for novices.

The same holds true for other animals, says Gayle Hunter, a Pets/Animal Forum sysop. "Some cat breeds are more active than others, and some are grooming nightmares," she says. Siamese cats are vocal and mischievous, and Hunter's own Maine Coon cat's fur becomes a matted mess without frequent brushing. Non-pedigreed cats, on the other hand, may not look as exotic but tend to be healthier. (Indeed, although purebred animals are somewhat more predictable, mixed breeds can make terrific pets, experts say.)

Similarly, someone charmed by the idea of a pet snake should understand that they vary widely. "You can get a tiny milk snake that will eat baby mice and happily live its entire life in a 10-gallon aquarium, or you can get a giant python, feed it rabbits and ducks, and get it a cage the size of a small room," says Pets/Animal Forum member and

## RANDOM ACCESS

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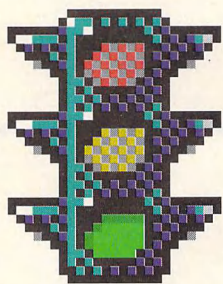
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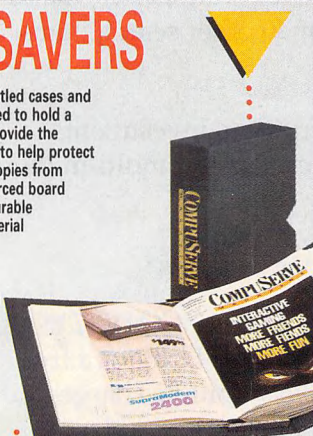
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Atlanta, Georgia, resident Mark Ciccarello, who keeps Emerald Tree boas. "If you want a tame animal that you can handle, these wouldn't be good, as they are very quick to strike and have extremely long teeth with which to make their point," he says, adding that they're also not good for beginners because their health tends to be delicate.

In the same way, not all birds require the same level of care. Josie T. Konig says her finches, parakeets, and canaries are low-maintenance pets that don't require much attention. "This does not mean that they like being ignored, but they won't scream if they are," says Konig. Parrots, in contrast, crave interaction and need lots of training to form a successful relationship with a human. "Otherwise you wind up with a bird with serious behavior problems. It will become aggressive, and may scream endlessly or pull out its own feathers," says Ciccarello, who hopes to add a parrot to his household soon.

Which brings up another consideration: when creating a family of pets, make sure the critters are compatible. Barb Hunter, a staffer on CompuServe's Aquaria/Fish Forum, says first-time fish buyers sometimes don't realize they need to choose fish that require similar water quality in terms of temperature, acidity, hardness, and tolerance for chemicals. Adds Hunter, "One also needs to consider if some fish would like to snack on others."

In addition, says Lenny Southam, one of several veterinarians who offer advice in the Pets/Animal Forum's Section 7, "Ask-a-Vet," whether a blended pet family get along depends on several things, from how much

space the animals have to what species and breed they are. "Cats and hamsters tend to be territorial and don't accept new group members," Southam says. "Akitas are more aggressive than sheepdogs." Sex matters, too; males are usually more aggressive than females, and tend to fight with each other if they're not neutered. It helps

if an owner can spend time overseeing introductions among the animals and making sure that each gets some individual attention as well. "Take it slowly," Southam advises.

Once the type of animal has been chosen, where is the best place to buy it? Shelters can be excellent sources. "Most animals end up there because their owners were less than ideal, not the animals themselves," says Kilcommons.

Another option is a rescue service, a network of volunteers who find homes for unwanted animals. "There are rescue services for almost every type of pet animal, from parrots and potbellied pigs to dogs, cats, horses, and ferrets," as well as for specific breeds of animals, says Vicki Rodenberg, leader of the Pets/Animal Forum's "Rescue Network" section. Most charge a nominal fee—about \$75 to \$150—to cover neutering and medical expenses.

That's how Hubert Plummer of Long Island, New York, found the perfect dog for his household, which already included a couple of cats. He contacted a basset-hound rescue group in his area, which soon found a young one that had lived with cats before and was left in a kennel for four months after the owner died. "Watson is a perennially happy dog," Plummer says. "Being able to rescue such a great guy from a kennel, and possibly

## RANDOM ACCESS

## Life With the Show-Pet Set

Many pet-show enthusiasts say the real rewards from entering competitions aren't the kind that sit on a mantel or in a trophy case.

"One of the best things about showing cats is the people you meet," says Martha Kohlmeyer, a regular in Section 9, "Cat Breeder's World," of the Pets/Animal Forum. "Where else could you go for a weekend and talk cats nonstop without someone saying, 'Too much, already!'"

For Kimm Rossiter, a California bird breeder, pet shows instead offer a chance to learn what characteristics are considered ideal in a particular breed so that she can improve her own line of birds.

Toronto resident Carol Taylor, who frequents Section 7, "The Show Dog," in Time Warner's Dogs & Cats Forum, says competitions offer a chance to share quality time not only with her pups but also with her youngsters. "My kids are in junior handling, so the whole family enjoys it," she says.

There are shows for just about every kind of pet, but it's not for everyone. For example, some exhibitions, such as dog shows, disqualify neutered or mixed-breed animals, says trainer Brian Kilcommons. Others, such as cat shows, sometimes feature non-pedigreed animals and allow neutered animals.

Showing is also expensive. "It costs \$2,000 and up to finish a dog's championship," determined by compiling points won at several shows, Kilcommons says. Owners must budget for such things as grooming and entry fees, and possibly a professional handler. And then there are the traveling costs, as most weekends must be devoted to attending shows, some hundreds or thousands of miles away.

Ask Cathy Visser, who shows her Tokinese cat, JoJo. "I spent nearly every weekend with JoJo for almost two years," the San Francisco-area resident says. "My fiancé saw me less than JoJo did."

—MB



## TECHNOLOGY UPDATE

## 900 MHz breakthrough!

## New technology launches wireless speaker revolution...

Recoton develops breakthrough technology which transmits stereo sound through walls, ceilings and floors up to 150 feet.

By Charles Anton

If you had to name just one new product "the most innovative of the year," what would you choose? Well, at the recent *International Consumer Electronics Show*, critics gave Recoton's new wireless stereo speaker system the *Design and Engineering Award* for being the "most innovative and outstanding new product."

Recoton was able to introduce this whole new generation of powerful wireless speakers due to the advent of 900 MHz technology. This newly approved breakthrough enables Recoton's wireless speakers to rival the sound of expensive wired speakers.

**Recently approved technology.** In June of 1989, the *Federal Communications Commission* allocated a band of radio frequencies stretching from 902 to 928 MHz for wireless, in-home product applications. Recoton, one of the world's leading wireless speaker manufacturers, took advantage of the FCC ruling by creating and introducing a new speaker system that utilizes the recently approved frequency band to transmit clearer, stronger stereo signals throughout your home.



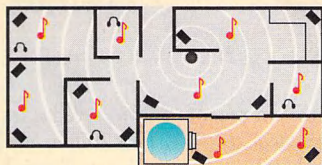
**Crisp sound throughout your home.** Just imagine being able to listen to your stereo, TV, VCR or CD player in any room of your home without having to run miles of speaker wire.

Plus, you'll never have to worry about range because the new 900 MHz technology allows stereo signals to travel over distances of 150 feet or more through walls, ceilings and floors without losing sound quality.

#### 150 foot range through walls!

Recoton gives you the freedom to listen to music wherever you want. Your music is no longer limited to the room your stereo is in. With the wireless headphones you can listen to your TV, stereo or CD player while you move freely between rooms, exercise or do other activities. And unlike infrared headphones, you don't have to be in a line-of-sight with the transmitter, giving you a full 150 foot range.

The headphones and speakers have their own built-in receiver, so no wires are needed between you and your stereo. One transmitter operates an unlimited number of speakers and headphones.



Recoton's transmitter sends music through walls to wireless speakers over a 75,000 square foot area.

**One transmitter, unlimited receivers.** The powerful transmitter plugs into a headphone, audio-out or tape-out jack on your stereo or TV component, transmitting music wirelessly to your speakers or headphones. The speakers plug into an outlet. The one transmitter can broadcast to an unlimited number of stereo speakers and headphones. And since each speaker contains its own built in receiver/amplifier, there are no wires running from the stereo to the speakers.

#### Full dynamic range.

The speaker, mounted in a bookshelf-sized acoustically constructed cabinet, provides a two-way bass reflex design for individual bass boost control. Full dynamic range is achieved by the use of a 2" tweeter and 4" woofer. Plus, automatic digital lock-in

tuning guarantees optimum reception and eliminates drift. The new technology provides static-free, interference-free sound in virtually any environment. These speakers are also self-amplified; they can't be blown out no matter what your stereo's wattage.

**Stereo or hi-fi, you decide.** These speakers have the option of either stereo or hi-fi sound. You can use two speakers, one set on right channel and the other on left, for full stereo separation. Or, if you just want an extra speaker in another room, set it on mono and listen to both channels on one speaker. Mono combines both left and right channels for hi-fi sound. This option lets you put a pair of speakers in the den and get full stereo separation or put one speaker in the kitchen and get complete hi-fi sound.



These wireless stereo headphones have a built-in receiver.

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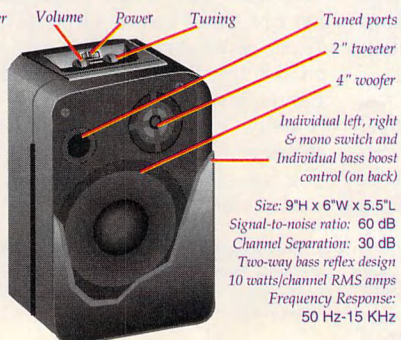
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Size: 9"H x 6"W x 5.5"L  
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# Critter Counsel: Pet Forums' Advice Files

Whether you're looking for information before buying a pet or want help with one you've recently purchased, you'll find advice, software, book excerpts, and more in forum libraries. For tips on choosing an animal to bring home, search the libraries in the Pets/Animal Forum or Time Warner's Dogs & Cats Forum with such keywords as SEARCH\* or NEW, or visit the occasional online "classes" on picking pets in the Pets/Animal Forum. The following are just a sampling of files available.

## Aquaria/Fish Forum (GO FISHNET)

**Disease Briefer**—Alphabetical listing of common fish-disease treatments and their recommended dosages. Library 1, "Your First Aquarium," BL0029.TXT (7,493 bytes).

**Reading List**—Recommended reading list for beginning fish owners, including freshwater, saltwater, and pond titles. Library 1, BL0025.TXT (16,032 bytes).

**Freshwater Guide**—Article for beginners and hobbyists about starting and maintaining a healthy freshwater aquarium. Library 1, BL0023.TXT (18,406 bytes).

## Pets/Animal Forum (GO PETSFORUM)

**Animal Trivia**—Software program full of entertaining, educational animal facts. Covers cats, dogs, farm animals, whales, birds, and bugs. Library 1, "Programs," ANIMAL.EXE (27,505 bytes).

**My Dog Demo**—Demo of My Dog, a program for IBM-compatible PCs that keeps track of vital care information for your pet. Monitors immunizations and exams, costs, schedules, and complete medical history. Library 1, MYDOG.ZIP (73,472 bytes).

**Finding the Right Breed**—Forum message thread on finding the right breed of dog. Covers breed characteristics, personalities, suitability, rescue organizations, shelters, breeders, and more. Library 3, "Dog Library," FNDBRD.THG (69,500 bytes).

**Raising Kittens**—Article addressing delivering and raising kittens. Library 4, "Cat Library," KITNIN.TXT (25,934 bytes).

**Sick-Cat Care**—Advice on caring for sick cats. Library 4, SICK.TXT (6,224 bytes).

**Cockatiel Care**—*The Cockatiel Care Handbook*, by Catherine A. Toft. Basic care manual for pet cockatiels. Library 5, "Caged Bird Library," TIELCA.TXT (127,432 bytes).

**Caring for Common Iguanas**—Care sheet addressing the history of the green (or common) iguana, proper housing, light, heat, and food. Library 6, "Reptiles/Exotic," LEDGER.TXT (9,326 bytes).

**Taming Reptiles**—Article about pet-reptile interactions with humans and issues related to taming common pet reptiles. Library 6, TAME.FAQ (17,160 bytes).

**Do Monkeys Do?**—Message thread on the question "Do monkeys make good pets?" Library 6, MONKEY.THG (13,369 bytes).

**Moving a Horse Along**—Message thread on getting a horse to move forward. Library 8, "Horse Library," FWRD.THG (14,976 bytes).

## Time Warner's Dogs & Cats Forum (GO TWPETS)

**Healthy Purebred Pups**—Guide to buying a purebred puppy, including steps to avoid common mistakes. Library 1, "General Information," PUPBUY.ART (12,672 bytes).

**Family Dog**—Excerpt from *Childproofing Your Dog* that tells how to select an appropriate dog for your household. Covers breeds, sexes, ages, and how to tell if the dog will be "nice." Library 2, "Behavior Hotline K9," FAMILY.DOG (19,680 bytes).

**Feeding and Bathing**—Two articles from *Good Owners, Great Dogs* that address feeding and bathing your dog. Library 3, "The Healthy Dog," DIETDG.BOK (3,566 bytes), BATHNG.BOK (2,812 bytes).

**Cat Scratching**—Steps to control and prevent cat scratching and biting. Library 8, "Feline Behavior," AGGRES.CAT (2,844 bytes).

**Litter Box**—Ideas to get your cat to use the litter box consistently. Library 8, BOXPRB.TXT (4,257 bytes).

**Cat Care 1.1**—Software program for IBM-compatible PCs to help cat owners take better care of their pets. Covers first aid, disease, restraining, symptoms of illness, general health, newborns, older cats, and more. Library 9, "The Healthy Cat," CATCAR.ZIP (274,653 bytes).

a lonely death, makes me feel wonderful." (For more about rescue services for various types of animals, as well as information on how to contact networks in various geographic locations, consult the Pets/Animal Forum's Library 17, "Rescue Networks.")

Breeders are another source. Kathy Weaver, of Abingdon, Maryland, found her Red Somali kitten through a breeder in Montreal she met online in Section 4, "Cat's Meow," of the Pets/Animal Forum. The two corresponded, and soon little Nugget was winging her way on a commercial airline from Canada to Maryland. Good breeders will quiz potential customers about the kind of home they'll provide, volunteer information on the good and bad qualities of the breed, and offer to take the pet back if it doesn't work out.

Pet stores, on the other hand, are a mixed bag, says Pets/Animal Forum sysop Cheryl Tisdale. "It's definitely a 'buyer beware' situation." Many sell so many different animals that the staff may not have in-depth knowledge about them all. Says Tisdale, "If I were to buy an animal from a pet store, I would make sure I was extremely knowledgeable

about the pet I was interested in." In recent years, news reports have linked pet stores and so-called puppy mills—unethical operations geared solely toward making money in which, typically, dogs are repeatedly bred and raised under inhumane conditions—and for that reason, many experts advise against getting puppies at pet stores. Still, pet stores may be the only convenient source for finding less common animals, says Tisdale, who bought her cockatiel at one.

Once a pet comes home, challenges arise. New owners often wonder what to feed their pets and how often. They must consider fleas, housebreaking, cages and bedding, neutering, obedience training, and whether the pet should be kept indoors.

There's help online. Beginning fish fanciers get advice in "Your First Aquarium," Section 1 of the Aquaria/Fish Forum. Pet-related businesses offer customer support in the Pet Products/Reference Forum. Time Warner's Dogs & Cats Forum libraries feature extensive excerpts from *Childproofing Your Dog*, a book Kilcommons and fellow sysop Sarah Wilson authored.

Then there's the accumulated wisdom of

forum regulars who are passionate about pets. When Vic Barnhart got Gandalf, a tiny African Timneh gray, he'd never hand-fed a baby bird, and didn't know how fast it would grow or when it would learn to perch. He found advice and reassurance in the Pets/Animal Forum. "One breeder of Timnehs even sent me a day-by-day average-weight chart that she had compiled," the St. Louis, Missouri, resident says.

Louise Baldwin faced a more vexing problem: Her brand-new potbellied pig refused to eat. It was Thanksgiving weekend, and the vet's office was closed. "I was starting to see her ribs, and I was very worried," the Dallas, Texas, resident recalls. In a panic, she logged on for the first time to the Pets/Animal Forum, and members talked her through it. "Finally, I got Charlotte to start eating sweetened oatmeal. Turns out she was getting sweetfeed at the breeders and had"—what else?—"a real sweet tooth." ☺

*Freelance journalist Martha Barnette shares her Louisville, Kentucky, home with three cats, a vizsla, and a 105-pound white mutt. Her CompuServe User ID number is 75300,3140.*



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# Downloadable Notables

**D**ownloadable Notables is a monthly catalog of new and interesting uploads compiled by associate editor Christopher Galvin. You can suggest a file for mention by sending the full forum file description (including forum name, library, file name, size, title, and summary) and a note explaining why it caught your fancy to CompuServe User ID number 71154.74. *Do not send the file itself or questions regarding listed files.* Many mentioned program files are shareware; view the full file description online for details, and please support the shareware concept. If you cannot locate a file, check the forum's News Flash for late changes or post a message within the forum to \*SYSOP asking for assistance.

\*\*\*\*\*

## FROM THE DOWNLOADABLES E-MAILBAG

Let's slice open a few virtual envelopes to see members' favorites files.

**Michael Riordan** suggests the Personal Tennis Coach, a DOS title designed to help you play better tennis, with stroke rating and charting, game analyzer, and more. "It emulates a coach's ability to keep a player focused on improvement," says Riordan. It's in the Sports Forum (GO FANS).

### Library 5, "Other Sports"

TENNIS.ZIP (150,729 bytes) **D**

**Brit Neville Hobson** suggests "one of the best" Windows file-manager replacements he's come across, the Windows Commander, with drag-and-drop; copy, move, delete, and pack functions for whole directories; internal unzip; and more features. "Wow! It has a fully customizable button bar, and it's so easy to manipulate files, with a dual-window display of different directories or drives!" Hobson emphasizes. It's in the Windows Shareware Forum (GO WINSHARE).

### Library 9, "Program Managers"

WCMD\_E.ZIP (282,364 bytes) **W**

**Mark Tidmarsh**, a Londoner working for the Tokai Bank, likes Chat for PC LANs, a phone utility designed to allow CB-like real-time chat with other LAN users. "I found it very easy and fun to use, and it's small even when unzipped," he says. It's in the Windows Fun Forum (GO WINFUN).

### Library 3, "Other Games/Fun"

LANCHA.ZIP (8,273 bytes) **W**

**Alex Lerner**, a ZiffNet member, wants image-manipulation buffs to take a look at

Image 'n' Bits, a serious tool for PC graphic artists allowing image cleanup, flipping, dithering, and adding of a variety of special effects such as embossing and blurring. "The most outstanding features are some fun-house-mirror-type distortion filters—really weird, cool stuff," Lerner adds. The file is in the Ziff Computer Shopper Forum (GO COMPSHOPPER).

### Library 11, "Shareware Shop"

IMA.ZIP (470,912 bytes) **W**

**William Seymour** suggests the Windows disk manager Space Hound, which identifies files that are duplicates, obsolete, or forgotten, and includes a printable directory map that displays nested storage totals. Seymour says he's tried 20 other programs of this type, but finds Space Hound beyond reproach. "It's not memory-intensive, and on my system runs with amazing speed."

Look in the Zenith Data Systems Forum (GO ZENITH).

### Library 15, "Windows"

SPACEH.ZIP (531,566 bytes) **W**

**Gordon Parker** asks, What do CompuServeCD and other programs do to your Windows system during installation? He says you can find out quickly with Before & After, two batch files to be run prior to and following a software installation that create a text file listing all new directories, additions to directories, and INI file changes. "It's small, free, and works great," he says. Check the CompuServeCD Forum (GO CCDSUP).

### Library 3, "Member Uploads"

BEFAFT.EXE (18,576 bytes) **D**

## This Month's FILE CLUSTER

All the leaves are brown, the skies are gray, and this File Cluster helps you see the sorts of things squirreled away in various CompuServe forum libraries. The key, friend, is that they all have the same keyword. This month, an expanded edition: You're screwed without this spiral groove, and "bare," quite torn and tattered; but the online kind just stores the line of talk that really mattered: THREAD. All files mentioned are ASCII or ZIPped text.

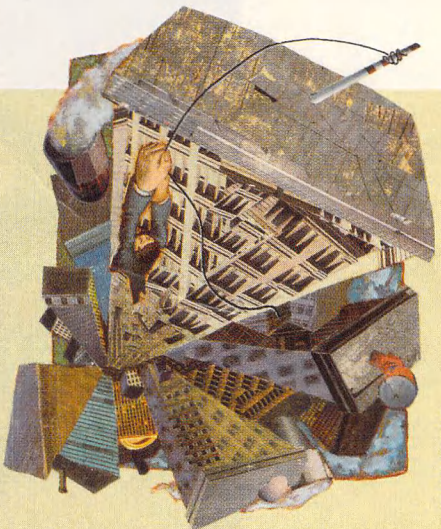
**No Excuses**—What to do when the ADD-stricken start using the affliction as a crutch for questionable behavior is hashed over. Attention Deficit Disorder Forum (GO ADD), Library 10, "Relationships," EXCUSE.TXT (11,302 bytes).

**Highway Eyesores**—Never mind rust buckets, we're talking purely poor design in these nominations for the Ugliest Vehicles Ever Made. Automobile Forum (GO CARS), Library 1, "General," UGLY.ZIP (36,473 bytes).

**I Wear My Sunglasses in Flight**—Even non-pilots will enjoy this look at shades that are and aren't suitable for aviation use. Aviation Forum (GO AVSIG), Library 10, "Medical/Human Factors," SUNGLS.ZIP (8,999 bytes).

**Ask Mr. Bubbly**—Sparkled by a novice's query on choosing a special champagne for a romantic interlude, these answers are served up with thoughts on dinner reservations. Bacchus Wine Forum (GO WINEFORUM), Library 7, "Wine Answers," BUBADV.THD (12,768 bytes).

**CD-ROMs for Kids**—If you're looking for good worth-the-money titles, this recent collection of suggestions is required reading. CDROM Forum (GO CDROM), Library 2, "Titles & New Products," KIDCD.ZIP (92,695 bytes).



BRIAN BEHNKE

**Looks at Books**—What's the difference between first editions, first impressions, and first issues? Read on. Collectibles Forum (GO COLLECT), Library 10, "Books and Media," FIRSE.TXT (5,409 bytes).

**Thanks, but Forget It**—How to say no to clients who don't want to pay your consulting rates is discussed. Computer Consultant's Forum (GO CONSULT), Library 5, "Client Issues," NO.THD (39,200 bytes).

**Pump Up Your Jams**—One of the most downloaded files is this summary of surprisingly affordable upgrades you can make to your audio system. Consumer Electronics Forum (GO CEFORUM), Library 3, "Audio Hardware," UPGRAD.THD (7,790 bytes).

**Bleach Blanket, Bingo!**—Ack! You've just spilled your lunch on a brand-new quilt! Crafters explain ways to get the stain out (bleach isn't one). Crafts Forum (GO CRAFTS), Library 7, "Quilting," CLEANQ.THD (11,857 bytes).

**Clip-Art Rules**—What can and can't you do with the freely available graphics? The fair, legal uses are discussed. Desktop Publishing Forum (GO DTPFORUM), Library 1, "Forum Transcripts," ARTUSE.TXT (16,039 bytes).

## Key to Mentioned Files

<b>D</b> DOS	<b>O</b> OS/2
<b>G</b> Graphics	<b>T</b> Text
<b>M</b> Macintosh	<b>W</b> Windows



**David B. Libby** suggests that that if the beauty of fractals appeals to you, so might cellular-automaton study programs, which simulate evolving artificial-life forms. His VGA-required file demonstrating the "Langton Ant" concept discussed in July's *Scientific American* shows regularity in complex rule-based systems, "including a rule that produces ever increasingly complex ribbon patterns on the screen," he says. For programs like this and others, try the Science/Math Forum (GO SCIENCE).

Library 1, "Fractals/Chaos"  
LANG.ZIP (55,876 bytes) **D**

**Brett W. Sabio**, an accountant who is "always searching for ways to automate my and my clients' businesses," has reviewed

many payroll programs over the years and finds Zipper Payroll to be the best he's seen. Ed Protas's menu-driven shareware is designed for the mathematically uninclined businessperson, with context-sensitive help, export functions to Quicken, and support for a variety of payroll timetables, income types (salary, hourly, etc.), and variables (401K programs, taxes, etc.). It also maintains running totals of sick and vacation time and prints W-2 tax documents and other reports. "Not only is the \$67 shareware price a real bargain, but it outperforms programs costing three or four times as much," says Sabio. Zipper Payroll is in the Working From Home Forum (GO WORK).

Library 9, "Accounting & Tax"  
ZPAC17.EXE (559,634 bytes) **D**

**James Ullom** suggests OS/2 users look at his freeware PM application LightWaves, a multimedia-presentation composer that precisely and easily lets you synchronize Windows bit-map (BMP) images with WAV-format and MIDI sound. It also permits the use of an OS/2-supported CD-ROM drive to include compact-disc sounds within presentations. "It should be very interesting to many OS/2 users," says Ullom. The program requires OS/2 version 2.1 and MMPM/2 version 1.1, and is available in the IBM OS/2 User Forum (GO OS2USER).

Library 4, "Application Quest"  
LIGHT1.ZIP (130,036 bytes) **O**

**Warning Signs**—What symptoms suggest the possibility of Adult Onset Diabetes? This archive will explain. Diabetes Forum (GO DIABETES), Library 1, "General Information," ADULTO.THD (9,598 bytes).

**Genes and Health**—Genealogy and genetics blended interestingly in this online talk about inherited tendencies and disease. Genealogy Forum (GO ROOTS), Library 6, "Text Files," GENET1.ZIP (31,110 bytes).

**If Your Parents Drank**—A frank discussion among adult children of alcoholics on how they perceive themselves and relate to others. Health & Fitness Forum (GO GOODHEALTH), Library 2, "Addiction/Recovery," ACOA.THD (55,302 bytes).

**Indecent Proposal Discussion**—Robert Redford's proposition in the popular (but kind of corny) movie touched a nerve among this thread's participants: does everyone have a price? Human Sexuality & Relationships Open Forum (GO HSX100), Library 6, "Matters of Morals," PROPOS.THD (35,831 bytes).

**OS/2 Faves**—What OS/2 utilities are worth buying or skipping? A lively talk ensued in this archive. IBM OS/2 Users Forum (GO OS2USER), Library 4, "Application Quest," UTILS.ZIP (28,663 bytes).

**Buy or Don't Even Try?**—How do you evaluate "proof of product," identifying whether a product being offered for market exists? Read and learn from this discussion. International Trade Forum (GO TRADE), Library 2, "IT Practices," PROOF.THD (27,988 bytes).

**Investing Info**—One of about a zillion archived threads here, describing where on CompuServe you can find information on a company in which you're interested in buying stock. Investors Forum (GO INVFORUM), Library 15, "The Novice Investor," COMPAN.THD (26,712 bytes).

**Ebert Speaks**—The bigger, better half of the dynamic film-review duo, Roger in this 1992 archive answers questions from forum members, including how he teases partner Gene Siskel. Journalism Forum (GO JFORUM), Library 3, "Freelancers," EBERT.TXT (108,602 bytes).

**Will or Won't**—Do you really want to use will-drafting programs to make or revise your last testament? A heated exchange debates the pros and cons. Legal Forum (GO LAWSIG), Library 0, "General," WILPRG.THD (22,609 bytes).

**Clog-Free Blood**—A great big, healthy discussion about controlling cholesterol to avoid arterial disease. Medsig Forum (GO MEDSIG), Library 3, "Clinical Consulting," DIETLF.TXT (115,164 bytes).

**We Gotta Get Out of This Place**—A poignant, funny discussion of the music that got America and its soldiers through the Vietnam years. Military Forum (GO MILITARY), Library 3, "Vietnam," MUSIC.TXT (25,951 bytes).

**It's Game Over, Man**—A discussion of the toggling of call waiting while engaging in telecommunications and gaming. Modem Games Forum (GO MODEMGAMES), Library 13, "Hardware Help," CALLW.TXT (9,626 bytes).

**'Scuse Me While I Kiss This Guy**—Yup, it's just one of the misunderstood lyrics of famous pop songs recalled in this archived thread. Music/Arts Forum (GO MUSICARTS), Library 8, "Pop/Rock," MISUNL.ZIP (11,700 bytes).

**Whither Multimedia?**—Are firms in this new high-tech arena worthy of investment? This 1993 thread talked up a few. NAIC Investment Education Forum (GO NAIC), Library 6, "Stock Reports," TECH.ZIP (17,086 bytes).

**Why Lucidity?**—Members discuss why they strive for this special form of dreaming. New Age Forum (GO NEWAGE), Library 11, "Psychic Abilities," LUCID.TXT (31,410 bytes).

**Stop That Scratching**—Cat got your tongue wagging over destroyed furniture? Owners talk successes with the Soft Claws claw-cover product. Pets/Animal Forum (GO PETSFORUM), Library 4, "Cats," SETPWS.THD (10,304 bytes).

**Barry White, I'm Sure**—Hey, baby, what music creates the best atmosphere for, um, a little nookie? See if you agree with any of the choices offered. RockNet Forum (GO ROCKNET), Library 1, "Rock Music," SEXMUS.THD (31,381 bytes).

**Self-Defense for Women**—Info on organizations, products, and other resources was the subject of this 1990 thread. Safetynet Forum (GO SAFETYNET), Library 8, "Police Chatter," SELFDF.THD (17,877 bytes).

**Brushes With Greatness**—How NBC Today's Gene Shalit nearly met his fate on a forum member's car bumper and other tales of encounters with the famous are remembered. ShowBiz Forum (GO SHOWBIZ), Library 5, "Celebrities," KNOWN.THD (28,881 bytes).

**College PC**—Talk not of political correctness but of computers: what should you consider when buying one for your university-bound kid? Students' Forum (GO STUFO), Library 16, "Math/Science/Computers," PUTER.THD (49,087 bytes).

**Does 3.999999 Equal 4?**—The famous 1991 "Mystic Algebra" thread. UK Forum (GO UKFORUM), Library 10, "Hobbies/Interests," MYSTIC.ZIP (87,996 bytes).

**Start-up Bucks**—\$20,000 or less? The factoid that nearly half of all businesses begin with that amount launched this brief discussion. Working From Home Forum (GO WORK), Library 2, "Business Info," START.TXT (10,257 bytes).



Following are summaries of book reviews available for reading this month in Online Today. To read the complete reviews, use the GO commands listed at the end of each summary.

## CompuServe Companion: Finding Newspapers and Magazines Online

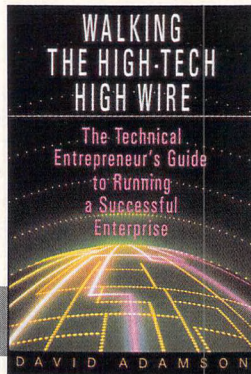
By Glenn S. and Ruth M. Orenstein  
BiblioData, 1994  
198 pages, \$29.95 (softcover)

This book serves as a map of the more than 3,300 newspapers, magazines, and newsletters on CompuServe, directing readers how to find them for the lowest search cost. Reviewer James Moran says the book will pay for itself in online time and cost savings. *GO OLT-5900*

## The Elements of E-Mail Style

By David Angell and Brent Heslop  
Addison-Wesley, 1994  
157 pages, \$12.95 (softcover)

Designed to show readers how to craft documents that are clear, readable, and uniform, this book discusses the major issues of e-mail messaging, including tone, style, composition, and formatting. Reviewer John Edwards says it deserves a place beside the keyboard of every electronic-mail user—even those who think they know how to write. *GO OLT-5910*



## Walking the High-Tech High Wire: The Technical Entrepreneur's Guide to Running a Successful Enterprise

By David Adamson  
McGraw-Hill, 1994  
229 pages, \$24.95 (hardcover)

This thoroughly practical handbook for owners and managers of small high-tech companies examines how to best compete, get needed financing, market effectively, and sell to international markets. This is a valuable operating tool for the ambitious high-tech entrepreneur, says reviewer William J. Lynott. *GO OLT-5930*

## Making Telecommuting Happen: A Guide for Telemanagers and Telecommuters

By Jack M. Nilles  
Van Nostrand Reinhold, 1994  
196 pages, \$24.95 (softcover)

This comprehensive and practical guide to telecommuting—working from home while connected to the office by modem and computer—is written by the man who coined the term. Reviewer Sharon Kahn says it provides a solid overview for employers and employees considering a move into telecommuting. *GO OLT-5960*

## The Mother of All Windows Books

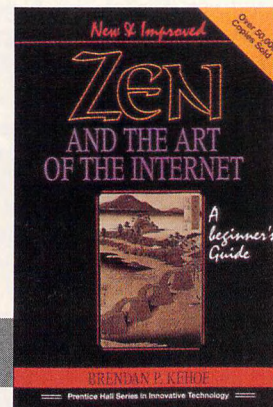
By Woody Leonhard and Barry Simon  
Addison-Wesley, 1993  
1,036 pages, \$39.95 (softcover with two 3.5-inch diskettes or one CD-ROM)

Calling this a wicked good book, reviewer Robert Sanchez praises it for being funny, quirky, immensely informative, and disrespectful of the cyber-gods who dwell in Redmond and Armonk. It picks up where the manual leaves off—filling in, poking holes, making fun, and proving you can laugh and learn at the same time. *GO OLT-5940*

## The Best of Byte: Two Decades on the Leading Edge

Edited by Jay Ranade and Alan Nash  
McGraw-Hill, 1994  
642 pages, \$24.95 (softcover)

This collection of the best articles from Byte magazine is a compendium of an industry in flux, growing and metamorphosing over 17 years of the magazine's coverage. Reviewer Paul A. Gilster says it allows readers not only to chart the growth of the microcomputer but also to feel a part of its development. *GO OLT-5950*



## Zen and the Art of the Internet: A Beginner's Guide (Third Edition)

By Brendan P. Kehoe  
PTR Prentice Hall, 1994  
263 pages, \$23.95 (softcover)

This third edition of the original guide to the Internet is both instructive and fun to read, packed with information on such topics as FTP, Usenet news, Gopher, InterNIC, and more. Reviewer Brian D. Monahan says it is an effective way to deal with the Internet's "savage user interface." *GO OLT-5920*

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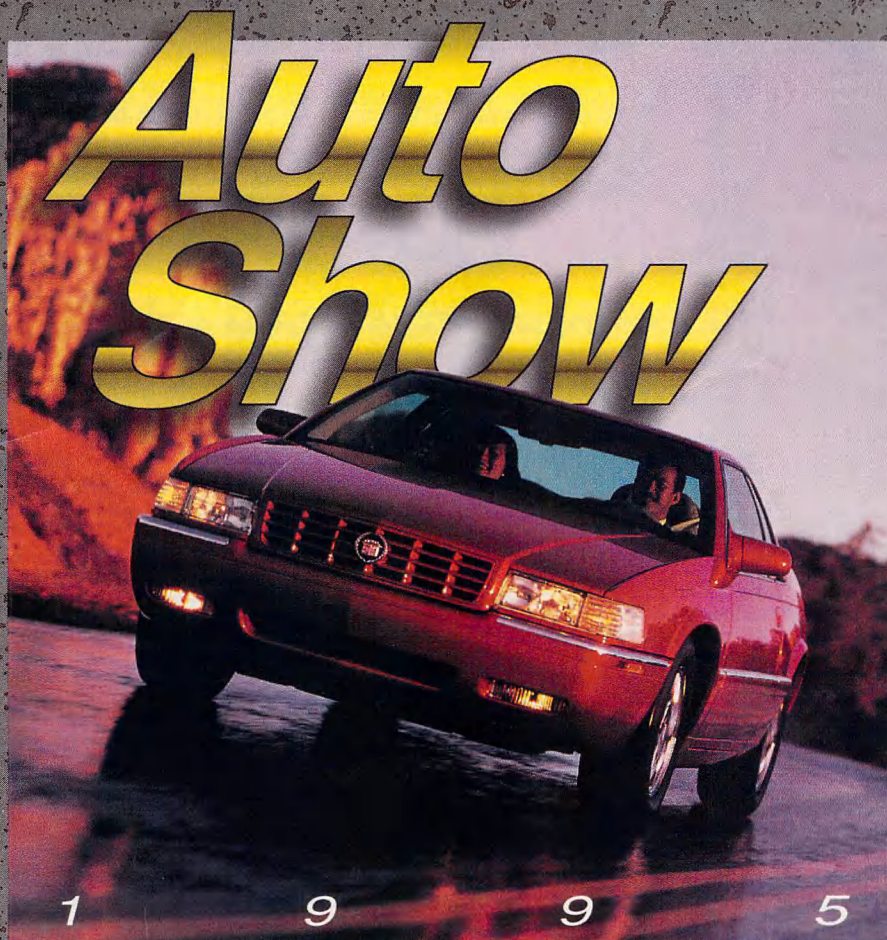
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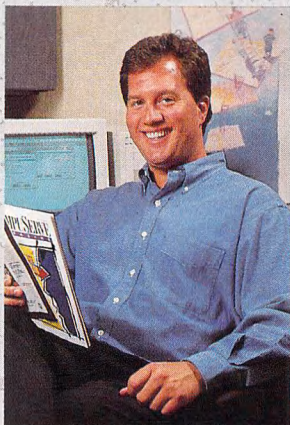


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October traditionally marks the introduction of the new car lines. Featured in this issue are new 1995 model introductions by Cadillac, Pontiac and Mercury, plus a carload of auto-related products to make travel time easier and more fun!

There's still time to play The Mall's "YOUR NUMBER'S UP!" Contest, too. If your CompuServe ID number "comes up" a winner, you could win the Grand Prize — a fantastic \$20,000 shopping spree from Shoppers Advantage Online! Plus you could win one of over 200 other valuable prizes donated by Electronic Mall merchants. You can enter once a day, every day through 13 October. Details on page 5.

Welcome this month to three new merchants at The Electronic Mall: Bassett Furniture (GO BASSETT), Bull & Bear (GO BNBG) and Centerbank Mortgage Company (GO CTB). Remember, you can browse these new stores — and any Mall store — connect-free, 24-hours a day. Happy shopping!

See you online.

*Keith Arnold*

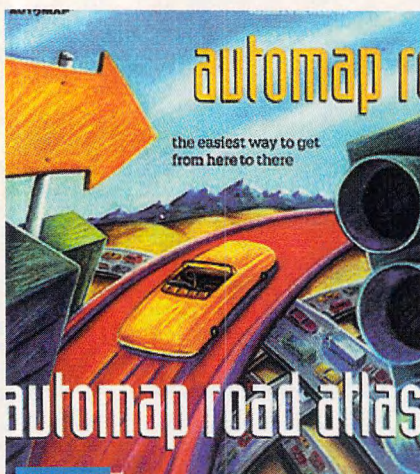
Keith Arnold  
Manager, The Electronic Mall



### Cadillac in 1995 — creating a higher standard.

Cadillac is creating a higher standard of performance, comfort, safety and quality. With 300 horsepower at your command, the 32-valve, V8 Northstar propels the Eldorado Touring Coupe past the 0 to 60 mph records set by many legendary muscle cars. See the entire 1995 lineup online and order your own complimentary videos and catalogs.

**CADILLAC MOTOR CAR. GO CADILLAC**



INTERNATIONAL  
DELIVERY  
AVAILABLE

### Let AutoMap Road Atlas 3.0 for Windows be your guide.

Whether you're heading across the state or around the country, AutoMap Road Atlas makes the going easier. It automatically plans your trip and shows the shortest, best routes. Puts over 410,000 miles of roads and 120,000 places at your fingertips. Includes directions, drive times and tourist information. Requires Windows 3.0 or higher.

**MICROWAREHOUSE. GO MCW  
AUTOMAP ROAD ATLAS FOR WINDOWS \$49.95**

### Hit the road with a Nissan Thermos and Coffee Mug.

The Nissan Thermos and Mugs are simply the best unbreakable thermal design ever! Their brushed stainless steel and high-impact plastic construction are completely unbreakable. Advanced vacuum insulation system make them the perfect traveling companions. Try our GMCR mug for only \$1.99!

**GREEN MOUNTAIN COFFEE ROASTERS. GO GMR**

**18-OZ. NISSAN MUG WITH "REST ON TOP"  
LID \$23.99**

**SLIM 16-OZ. NISSAN THERMOS \$29.99**

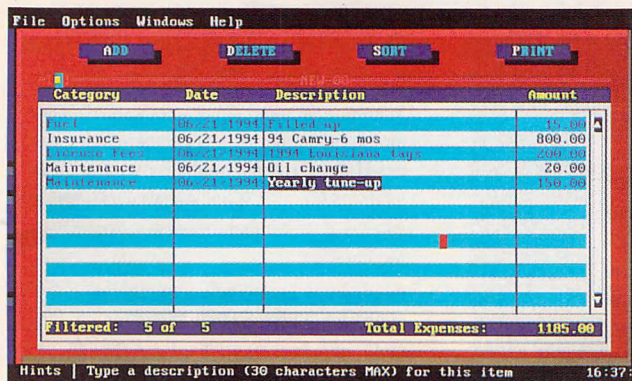
**16-OZ. NISSAN MUG WITH "SCREW TOP, SIP THRU"  
LID \$23.99**

**22-OZ. GREEN MOUNTAIN COFFEE ROASTERS  
MUG \$1.99**



INTERNATIONAL  
DELIVERY  
AVAILABLE





### Hit the road with free Auto Tracker software from Softdisk Publishing.

Keep track of all your automobile expenses — from basic maintenance to weekly detailing — with *Auto Tracker*. Download it free (a \$12.95 value) from Softdisk Publishing's Personal Software Collection, this month only!

**SOFTDISK PUBLISHING. GO SP**  
**AUTO TRACKER FREE DOWNLOAD**



### Introducing the Solo 4 Cordless Radar+Laser Detector.

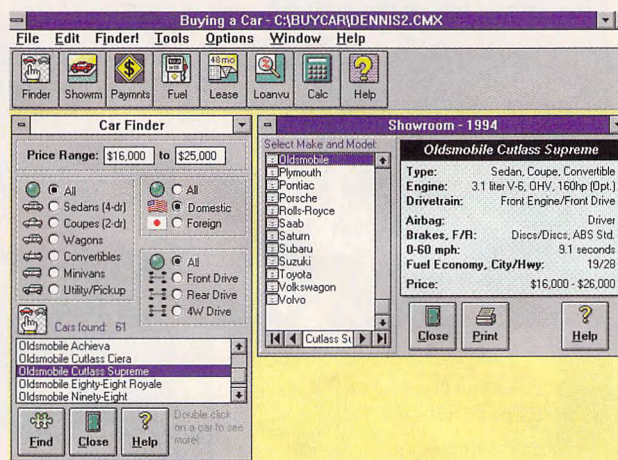
Solo 4 is the world's first cordless radar+laser detector. Advanced design lets it run on four AA alkaline batteries to provide months of full-powered, long-range detection. Cordless convenience makes it perfect for trips or for rental cars.

**THE ESCORT STORE. GO ESCORT**  
**SOLO 4 RADAR+LASER DETECTOR \$249**

### 1995 Mercury Mystique — it's a whole new Mercury!

Mystique is much more than just another new car. This is a true driver's car with uncanny handling, responsiveness and agility, as well as a choice of all-new, multi-valve four and six-cylinder engines. It's engineered with an emphasis on safety that goes well beyond standard dual airbags to incorporate some innovative new thinking. Go online for details and to view or download color illustration! Order your free brochure!

**LINCOLN-MERCURY SHOWROOM. GO MERCURY**



### Shop for your next car right on your PC!

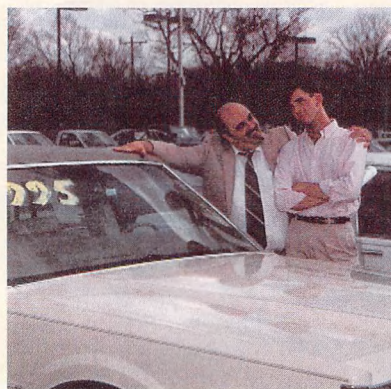
Before you set foot in a showroom, let the *Car Buyers' Companion for Windows* help you make the right decision. Contains a database of 200 different vehicles. Narrow your search with the Car Finder — choose a price range and let the program find matches. Compare monthly payments, interest rates and evaluate purchase options — loans, leases and more.

**PARSONS TECHNOLOGY. GO PA**  
**CAR BUYERS' COMPANION FOR WINDOWS \$19**

### Check the Auto Information Center for the best auto deal around.

Don't get "taken" by a sharp car salesman on your next automobile purchase. Arm yourself with the information you need to make a quality decision and get the top deal. Auto Information Center's New Car Reports show dealer costs from the factory. The Used Car Reports show current market values. For complete details, go online.

**AUTOMOBILE INFORMATION CENTER. GO AI**



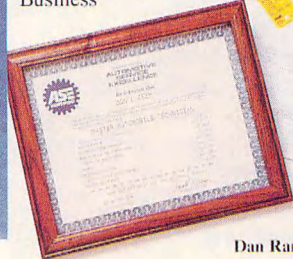


## CUSTOMIZING YOUR HARLEY



## Automotive Repair Service

Start and Run a  
Money-Making  
Business



Dan Ramsey

## BUILD YOUR OWN ELECTRIC VEHICLE



## AMERICAN MUSCLE CARS



WILLIAM G. HOLDER AND PHILIP KUNZ

Explore the world of autos and beyond  
— with books from McGraw-Hill.

Whether your transportation interests run to burly muscle cars, clean and lean electric vehicles, custom Harley Davidsons, or starting your own auto repair business, you'll find complete tips, facts and how-tos in these informative new books from McGraw-Hill.

**McGraw-Hill ON-LINE BOOKSTORE. GO MH**  
**CUSTOMIZING YOUR HARLEY \$19.95**

**BUILD YOUR OWN ELECTRIC VEHICLE \$26.95**

**AUTOMOTIVE REPAIR SERVICE: START AND RUN A**  
**MONEY-MAKING BUSINESS \$17.95**

**AMERICAN MUSCLE CARS \$29.95**

INTERNATIONAL  
DELIVERY  
AVAILABLE



### Try AutoVantage Online for only \$1!

AutoVantage Online will show you how to get the best deals on new or used cars, parts or service — anything automotive! You'll find discounts on accessories, stereos and more. Check out new car features and get all the pros and cons. A three-month trial AutoVantage membership is only \$1!

**AUTOVANTAGE ONLINE. GO ATV**  
**THREE-MONTH MEMBERSHIP ONLY \$1**

## CRUTCHFIELD

YOUR BUYER'S GUIDE FOR • CAR STEREO • AUDIO/VIDEO • COMPUTERS

### Car Stereo Special!



Clarion  
In-Dash CD  
for just \$249<sup>95</sup>  
see back cover

**FREE!**  
Installation Kit  
for Your Car  
or Truck with  
Receiver Purchase  
**SALE!**  
Selected Kicker  
and Infinity Speakers  
**SAVE!**  
Look for sale prices

### Get the finest in car stereos at great savings from Crutchfield Electronics.

You can't find a better combination of selection, prices and service than from the Crutchfield catalog. Choose from more than 100 car stereos, CD players and CD changers — speakers, amplifiers and equalizers, too! Over 100 pages. All the great brands. And all at discounted prices. Order your free catalog today!

**CRUTCHFIELD ELECTRONICS. GO CFD**



### Travel in style with the Pierre Cardin Ultimate Garment Bag.

This ultimate garment bag is made of supple, black leather with antiqued hardware throughout. Has a total of 12 storage pockets to hold virtually everything! Length extends from 46" to 63" — perfect for coats or dresses. Adjustable padded shoulder strap. Self-mending zippers throughout.

**SEARS SHOP AT HOME. GO SR**  
**PIERRE CARDIN GARMENT BAG \$199.99**



## Play the Mall's "Your Number's Up!" Contest

### You Could Win a \$20,000 Shopping Spree from Shoppers Advantage Online or Over 200 Other Exciting Prizes!

This year, if your CompuServe ID number "comes up" a winner, you could win the Grand Prize — a fantastic \$20,000 shopping spree from Shoppers Advantage Online. You'll choose from over 250,000 famous brand name products. Imagine a big-screen TV . . . a state-of-the-art home entertainment system . . . fine jewelry and watches . . . and lots more. To browse the prizes you could win, plus get a "sneak preview" of the all-new Shoppers Advantage

store coming in November, GO SA.

In addition to having a chance at the Grand Prize, you could be a weekly winner and choose from one of over 200 prizes donated by Electronic Mall merchants. GO YNU to explore the online prize showcase and see prizes like these — yours for the winning! Hurry, contest ends 13 October!

# YOUR NUMBER'S UP!

- 7-Year-Old Chinese Elm Bonsai Tree, a \$55 Value.  
Compliments of The Gift Sender, GO GS.
- One-Year Membership to Premier Dining, a \$50 Value.  
Compliments of Premier Dining, GO DINE.
- ½ Bushel of Holiday Mandarin Oranges, an \$18.95 Value.  
Compliments of Florida Fruit Shippers, GO FFS.
- Cambridge Oxford Buttondown Shirt, a \$29 Value.  
Compliments of Paul Fredrick MenStyle, GO PFS.
- Tin of Gourmet Chocolate Chip Cookies, a \$19.95 Value.  
Compliments of Gimmee Jimmy's Cookies, GO GIM.

- \$50 Gift Certificate.  
Compliments of CAMPMOR, GO CAMP.
- Serengeti Large Aviator Glasses, a \$130 Value.  
Compliments of Sunglasses, Shavers & More, GO SUN.
- *Oceans Below* CD-ROM, a \$30 Value.  
Compliments of Computer Express, GO EXPRESS.
- Arsenal Kaboom Drive, a \$118 Value.  
Compliments of Austad's, GO AU.
- Autumn Gourmet Basket of Treats, a \$50 Value.  
Compliments of Breton Harbor Baskets and Gifts, GO BH.



A.

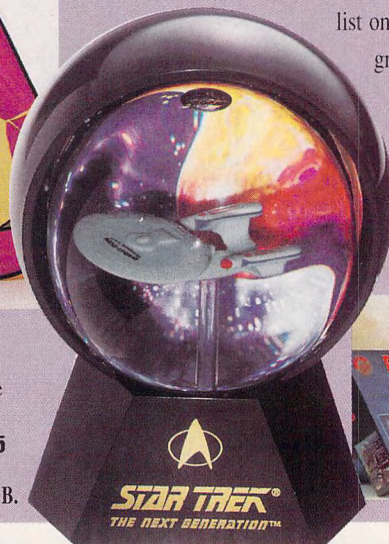
A. Pop-Up Play Hut **\$79.95**

B. Star Trek® The Next Generation Light Globe  
**\$69.95**

C. 3-D Bavarian Castle Jigsaw Puzzle **\$39.95**

HAMMACHER SCHLEMMER. GO HS

B.



## Make a Christmas Wish at Hamacher Schlemmer!

Remember making your Christmas wish list for Santa when you were a child? Hammacher Schlemmer invites you to make a wish list once again! Browse our online store featuring hundreds of great gifts for holiday giving. Fill out the official Hammacher Schlemmer Wish List entry form and tell us which gift or gifts priced at \$300 or less you'd like to find under the tree Christmas morning. The lucky winner will be chosen at random on Monday, 5 December, 1994. GO HS to enter.



C.



# MALL REFERENCE

A wide world of shopping  
at your fingertips.

Shopping has never been easier.

The Electronic Mall puts over

120 stores at your fingertips.

You can shop free 24 hours a day,

365 days a year, for a wide array

of products, information and

services. Use the handy directory

on these two pages for a complete

listing by category of Mall stores

and their GO commands. Then

GO MALL to shop online or to find

worldwide shipping information,

payment options, a detailed product

index, a directory of print catalogs,

and the latest Mall news, events and

contests. GO MALL

THE  
ELECTRONIC  
M·A·L·L®

No matter which pricing plan you have on CompuServe,  
shopping The Electronic Mall is connect-free, 24 hours  
a day, 365 days a year.

## APPAREL/DEPARTMENT STORES

AC	Americana Clothing
AU	Austad's
▼ BSET	Bassett Furniture
BR	Brooks Brothers
LEGG	Hanes L'eggs Bali Playtex JMS
▼ HSV	Home Shopping Values
JCP	JCPenney
LANDS	Lands' End
PFS	Paul Fredrick MenStyle
SA	Shoppers Advantage Online
▼ SHOES	Stuart McGuire Shoes



## ARTS/MUSIC/VIDEO

BBCM	BBC Magazine
CD	BMG Music Service
BOT	Books on Tape
CVA	Colonel Video & Audio
FREED	Columbia House
CCV	Critics' Choice Video
▼ EWK	Entertainment Works
JR	Justice Records
LE	The Laser's Edge
MMA	The Metropolitan Museum of Art
NP	Narada Productions
COUNTR	New Country Music Magazine
ROCKVI	Rock Video Monthly
▼ VID	Time Warner Viewer's Edge

## AUTOMOBILES

AI	Automobile Information Center
AQ	AutoQuot-R
ATV	AutoVantage Online
CMC	Cadillac Motor Car
ESCORT	The Escort Store
FC	Ford Credit
FORD	Ford Electronic Showroom
FMC	Ford Motor Company
LM	Lincoln-Mercury Electronic Showroom
PON	Pontiac Showroom

## BOOKS/PERIODICALS

BOMC	Book-of-the-Month Clubs
BOT	Books On Tape
CCB	Children's Book-of-the-Month Club
CBK	CompuBooks
ORDER	CompuServe Store
DB	Data Based Advisor
DFP	Detroit Free Press
ENT	Entrepreneur Group
FCB	Fortune Book Club
HAR	HarperCollins Online
HCB	History Book Club
LOS	Library of Science Book Club
ZD	MacUser
MSP	Microsoft Press
MH	McGraw-Hill On-Line Bookstore
NN	NewsNet
ND	Nicholas Direct
PCC	PC/Computing
ZD	PC Magazine
PCB	PC Publications
PRC	PRC Database Publishing
PTR	PTR Prentice Hall
QPB	Quality Paperback Book Club
BK	Small Computer Book Club
TWEPB	Time Warner Elect. Pub. Bookstore
USM	U.S. News & World Report
JW	Wiley Pro-Shop
WS	Windows Sources
ZD	Ziff Davis Publications Online

## CLUBS/MEMBERSHIPS

ATV	AutoVantage Online
PTR	PTR Prentice Hall
CD	BMG Music Service
BOMC	Book-of-the-Month Clubs
CCB	Children's Book-of-the-Month Club
FREED	Columbia House
CARD	CompuServe Visa Store
FFS	Florida Fruit Shippers
FCB	Fortune Book Club
LENS	Lens Express
LOS	Library of Science Book Club
DINE	Premier Dining
QPB	Quality Paperback Book Club
SA	Shoppers Advantage Online
BK	Small Computer Book Club
SP	Softdisk Publishing
TA	Travelers Advantage

## COMPUTER HARDWARE/ SUPPLIES

DP	AT&T Online Store
CBK	CompuBooks
CE	Computer Express
CS	Computer Shopper
CA	Concord Direct
DA	Dalco Computer Electronics
DD	Digital's PC Store
PWM	Exec/Direct
HTH	The Heath Company
JDR	JDR Microdevices
ZD	MacUser
MW	MacWarehouse
MZ	Mac Zone/PC Zone
MH	McGraw-Hill On-line Bookstore
MCS	Mission Control Software
MCW	MicroWarehouse
PA	Parsons Technology
PCA	PC Catalog
PCC	PC/Computing
ZD	PC Magazine
PCB	PC Publications
PRC	PRC Database Publishing
PTR	PTR Prentice Hall
SR	Sears Shop At Home
BK	Small Computer Book Club
WS	Windows Sources

## COMPUTER SOFTWARE

ABSOLU	Absolut Museum
BB	Broderbund
CF	CheckFree Corporation
ORDER	CompuServe Store
CE	Computer Express
CS	Computer Shopper
DB	Data Based Advisor
DD	Digital's PC Store
EP	Epic MegaGames
PWM	Exec/Direct
▼ HTS	Hybrid Technical Systems
IBMSP	IBM Personal Software Products
JDR	JDR Microdevices
▼ LTM	The Lotus Organizer Store
MW	MacWarehouse
MZ	Mac Zone/PC Zone
MCS	Mission Control Software
MCW	MicroWarehouse





PA Parsons Technology  
 PCA PC Catalog •  
 SAF Safeware Computer Insurance  
 SD Shareware Depot ■  
 SI Sierra Online  
 SP Softdisk Publishing

## GIFTS/FLOWERS/ GOURMET FOODS

FGH 800-Flowers & 800-Gifthouse  
 AIF Adventures in Food ★  
 AK Alaska Peddler  
 BH Breton Harbor Baskets and Gifts  
 BR Brooks Brothers  
 CC Chef's Catalog •  
 COF Coffee Anyone ???  
 FG Figi's Gifts •  
 FFS Florida Fruit Shippers ★  
 FS Flower Stop •  
 FTD FTD ONLINE  
 GW Garrett Wade Woodworking  
 GS The Gift Sender  
 GIM Gimme Jimmy's Cookies  
 GMR Green Mountain Coffee Roasters  
 HS Hammacher Schlemmer  
 HAM Honey Baked Ham •  
 LANDS Lands' End  
 LE The Laser's Edge  
 MMA The Metropolitan Museum of Art  
 OS Omaha Steaks ■  
 PFS Paul Fredrick MenStyle  
 DINE Premier Dining •  
 SUN Sunglasses, Shavers & More  
 ▼ VID Time Warner Viewer's Edge •  
 DINER Virginia Diner  
 WK Walter Knoll Florist

## HOBBIES/TOYS/PETS

CAMP CAMPMOR  
 GW Garrett Wade Woodworking  
 IAMS The IAMS Company •

## HOUSEWARES

▼ BSET Bassett Furniture  
 CC Chef's Catalog •  
 BEDS Dial-A-Mattress •  
 HS Hammacher Schlemmer  
 ▼ HSV Home Shopping Values •  
 JCP JCPenney ■  
 SR Sears Shop At Home •  
 SA Shoppers Advantage Online •

## INVESTMENTS/ FINANCE/REAL ESTATE

▼ BNBG Bull & Bear •  
 INC Business Incorporating Guide  
 ▼ CTB Centerbank Mortgage •  
 CF CheckFree Corporation •  
 CORP The Company Corporation  
 CARD CompuServe Visa Store •  
 CIC Continental Insurancenter •  
 DR Dreyfus Corporation •  
 ENT Entrepreneur Group •  
 EAM Express America Mortgage •  
 ▼ FC Ford Credit ■



HRB H&R Block •  
 HF HomeFinder by AMS ■  
 TKR Max Ule Discount Brokerage ★  
 NN NewsNet ■  
 RELO Relocation Network •  
 SAF Safeware Computer Insurance  
 SD Shareware Depot ■  
 CRE TRW Credentials •  
 TC Twentieth Century Mutual Funds  
 UP University of Phoenix •  
 JW Wiley Pro-Shop •  
 ▼ BSET Bassett Furniture

## MERCHANDISE/ ELECTRONICS

CC Chef's Catalog  
 CVA Colonel Video & Audio  
 CA Concord Direct ★  
 CFD Crutchfield Electronics •  
 BEDS Dial-A-Mattress •  
 ESCORT The Escort Store •  
 FMC Ford Motor Company ■  
 HS Hammacher Schlemmer  
 HTH The Heath Company  
 ▼ HSV Home Shopping Values •  
 ▼ HTS Hybrid Technical Systems  
 JCP JCPenney ■  
 PWP Penny Wise Custom Print Shop •  
 SR Sears Shop At Home •  
 SUN Sunglasses, Shavers and More

## OFFICE SUPPLIES/ BUSINESS SERVICES

INC Business Incorporating Guide  
 CORP The Company Corporation  
 CARD CompuServe Visa Store •  
 DR Dreyfus Corporation •  
 HRB H&R Block •  
 TTS H&R Block Tax Training School •  
 HF HomeFinder by AMS ■  
 TKR Max Ule Discount Brokerage ★  
 ND Nicholas Direct  
 PWP Penny Wise Custom Print Shop •  
 PW Penny Wise Office Products •  
 RELO Relocation Network •  
 SR Sears Shop At Home •  
 TC Twentieth Century Mutual Funds  
 USM U.S. News & World Report

## SPORTS/FITNESS/HEALTH

AC Americana Clothing  
 AU Austad's •  
 CAMP CAMPMOR  
 CL Contact Lens Supply  
 RX Health & Vitamin Express  
 LENS Lens Express  
 SDV SDV Vitamins ★

## TRAVEL/VACATIONS

AF Air France ■  
 ASU Airline Services Unlimited  
 AK Alaska Peddler  
 ▼ AMZ Amazing Vacation Deals  
 CRUISE Compu-Cruise by Rosenbluth  
 TA Travelers Advantage •

## GO MALL



### HOW TO SHOP:

When you see a product you would like to purchase, if prompted, type "O" to order. Otherwise, simply select the item from the menu. Continue shopping, or complete the order by typing "CHECKOUT." An electronic order form will appear and you will be prompted for all pertinent information such as size, color, delivery method and credit card billing. To cancel your order at any time, type "EXIT." Before your order is sent to the Mall merchant, you will have the opportunity to verify that your order is correct and to make any necessary changes. Once your order is complete, a CompuServe order number will be given.

### SHIPPING:

Shopping in most stores in The Electronic Mall is available to CompuServe members around the world. Certain postal, national and trade laws prevent certain Electronic Mall merchants from being able to ship their goods to all areas. The following guide will help you with your store selection:

- U.S. Only
- U.S. and Canada
- ▼ The Electronic Mall is pleased to welcome our newest merchants!
- ★ Please go online for details
- All other merchants ship worldwide.



## Stock Up and Save at the CompuServe Store Super Sale!



Now's the best time of all to take advantage of the *great* buys at the CompuServe Store! You'll find savings on everything from books and software to CompuServe logo merchandise like umbrellas, briefcases and T-shirts.

### COMPUSEVE STORE. GO ORDER

#### Save \$15 on CompuServe Information Manager software!

New and existing members can save on the latest version of *CompuServe Information Manager* software. Features window-like interface and pull-down menus.

#### COMPUSEVE INFORMATION MANAGER SOFTWARE

CURRENT MEMBERS LIST PRICE \$25

**SALE PRICE \$10 INCLUDES \$10 CONNECT-TIME CREDIT!**

#### Save \$9.95 on WinCIM User's Guide

A two-part book describes WinCIM™ and the use of CompuServe. A wealth of handy tips and information

#### WINCIM USER'S GUIDE

LIST PRICE \$19.95

**SALE PRICE \$10 INCLUDES \$10 CONNECT-TIME CREDIT!**

#### Save \$5 on CompuServe Information Manager for Windows: The Complete Handbook and Membership Kit

Everything you need to get the most out of *CompuServe Information Manager* software and CompuServe.

#### COMPUSEVE INFORMATION MANAGER FOR WINDOWS: HANDBOOK AND MEMBERSHIP KIT

LIST PRICE \$29.95

**SALE PRICE \$24.95 INCLUDES \$15 CONNECT-TIME CREDIT!**

**Special Bonus:** Now, through November, you'll receive this handy CompuServe tool kit — **free** with any purchase of \$75 or more! An \$11.50 value!



### THE COMPUSEVE COMMITMENT TO ELECTRONIC SHOPPING

As a CompuServe shopper, you are on the leading edge, shopping today the way the rest of the world will shop in years to come — electronically! We are continually striving to expand our roster of stores to provide you with the best products, services and information available. We welcome your comments and suggestions.

GO MALLMANAGER

SHOPPERS  
GUIDE

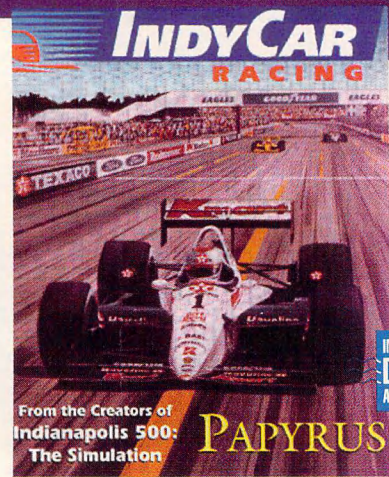




### Grab your mouse and take the wheel!

The Mouse Wheel turns your mouse into a realistic race car wheel! The mouse's trackball rides on top of the Mouse Wheel shaft, turning the wheel's rotating movements into equivalent mouse movements. Doesn't need game port or card. Works with virtually any simulation program using a mouse.

**MACWAREHOUSE. 60 MW  
MOUSE WHEEL \$32**



INTERNATIONAL  
DELIVERY  
AVAILABLE

From the Creators of  
Indianapolis 500:  
The Simulation

**PAPYRUS**

### Get set for the thrill of IndyCar Racing.

Put yourself behind the wheel, racing against the world's best drivers, in an 800-horsepower Indy car. You'll experience TV-like realism and speed, fantastic graphics, and details. Realistic handling and terrain — even down to the skid-marks around the turns! Requires IBM 386 and 25 MHz or higher. Joystick or driving wheel recommended.

**COMPUTER EXPRESS. 60 EXPRESS  
INDYCAR RACING**  
LIST PRICE \$74.99  
**YOUR PRICE \$39**

### Save up to 50% on everything for your car at Shoppers Advantage Online.

Whatever your automotive needs, Shoppers Advantage Online has thousands of brand names to choose from. You'll find low prices on car stereos, speakers, radar detectors, CB radios, car security devices, garage door openers, scanners and car accessories. You can make purchases even if you're not a Shoppers Advantage member, or join for three months for only \$1! As a member, you automatically get two-year warranty protection.

**SHOPPERS ADVANTAGE ONLINE. 60 SA**



### Pontiac Bonneville for 1995 — built around driving excitement.

Come see what Pontiac has in store for 1995. The Bonneville is a sports sedan that will turn any road into an autobahn. In SE, SLE, SSE and SSEi configurations, Bonneville delivers on its promise with high-performance V6 power. Plus all the premium amenities you'd expect in a vehicle of Bonneville's caliber — except the premium price.

**PONTIAC SHOWROOM. 60 PONTIAC**







### Find great entertainment on the run with Books On Tape®.

No matter how busy you are, you can enjoy best-selling books wherever you go. Commuting, exercising, or just relaxing, you can choose from nearly 3,000 full-length best-sellers on cassette for rent. Try the \$5 Introductory Offer or order your free color brochure.

**BOOKS ON TAPE. GO BOT**



**NEW  
MERCHANT**



### Find outstanding home furnishings styles and values at Bassett Furniture.

For over 90 years, Bassett Furniture has been committed to producing quality home furnishings that stand as a benchmark in the industry. Bassett today is a leader in the design and manufacture of dining rooms, bedrooms, tables, upholstered furniture, cribs and bedding. With over 5,000 items to choose from, we have the answer to your home furnishings needs. To find outstanding styles and tremendous values, tour our online showroom and order your free catalogs!

**BASSETT FURNITURE. GO BASSETT**



### Play hard and win big with Computer Gaming World.

Computer Gaming World is America's #1 computer game magazine. It's filled with special inside winning secrets, exclusive first-look reviews, facts on CD-ROM, and multimedia and interactive gaming environments. Take the leap into cyberspace — subscribe now and save 41%!

**ZIFF-DAVIS PUBLICATIONS ONLINE. GO ZD  
COMPUTER GAMING WORLD  
ONE YEAR (12 ISSUES) \$27.94**



### Make working on the road easy and productive with PC Catalog.

Check out PC Catalog's portable computing products before you leave! Hundreds of mail order vendors advertise in PC Catalog, and offer a wide selection of storage devices, modems, boards, notebooks, printers and a vast array of other products that can make your trip a success. PC Catalog is updated weekly, so shop now and save!

**PC CATALOG. GO PCA**





**Savor coffee with a French accent and save \$10!**

Brew the purest traditional French press coffee the easy way. Simply infuse coffee in boiling water in the coffeemaker, depress the stainless steel plunger and press out up to 8 cups of rich, flavorful coffee. The double-walled thermal carafe with vacuum liner keeps coffee hot for hours.

**CHEF'S CATALOG. GO CC**  
**THERMAL FRENCH PRESS COFFEEMAKER**  
 REGULAR PRICE \$50  
**SALE PRICE \$39.95**



**Invest in top performance and save 84% on commissions with Bull & Bear.**

Bull & Bear is one of America's fastest growing discount brokers serving individual and institutional investors throughout the U.S. and 37 other countries. At Bull & Bear you'll find a wide array of high quality mutual funds matched to your investment needs. Commissions are guaranteed 20% lower than Charles Schwab & Co. on every transaction. No extra handling or holding fees. No minimum balances. You get fast, courteous service. Go online to order your free information kit.

**BULL & BEAR. GO BNBG**

**BULL  
& BEAR**  
*Performance Driven®*



**Remember someone you love on Sweetest Day — with FTD ONLINE!**

Express your heartfelt love and appreciation with an FTD-fresh flower or plant from FTD ONLINE. All 100% guaranteed! Choose from our online selection of beautiful Sweetest Day arrangements, including the Colors of Love Bouquet featured here. Visit FTD ONLINE for all the details and to view or download color illustrations.

**FTD ONLINE. GO FTD**  
**COLORS OF LOVE BOUQUET \$54.95**

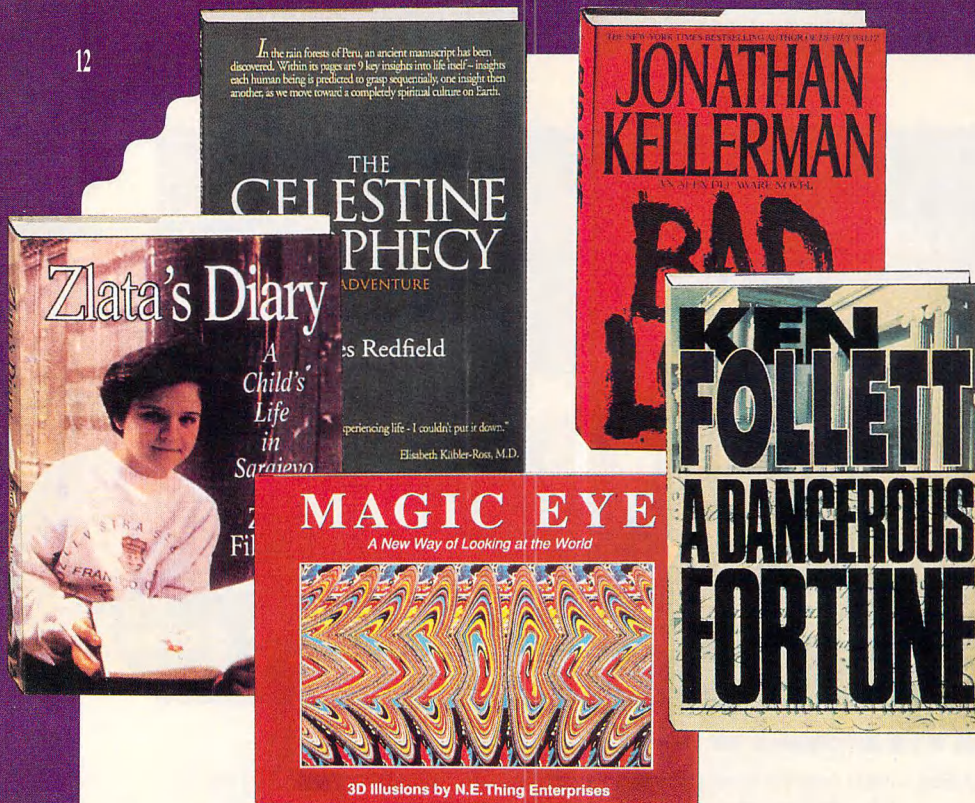


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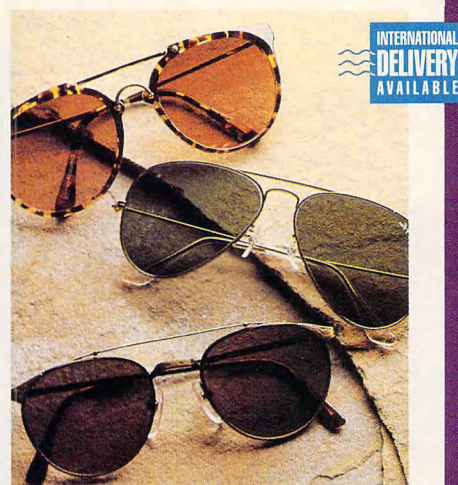




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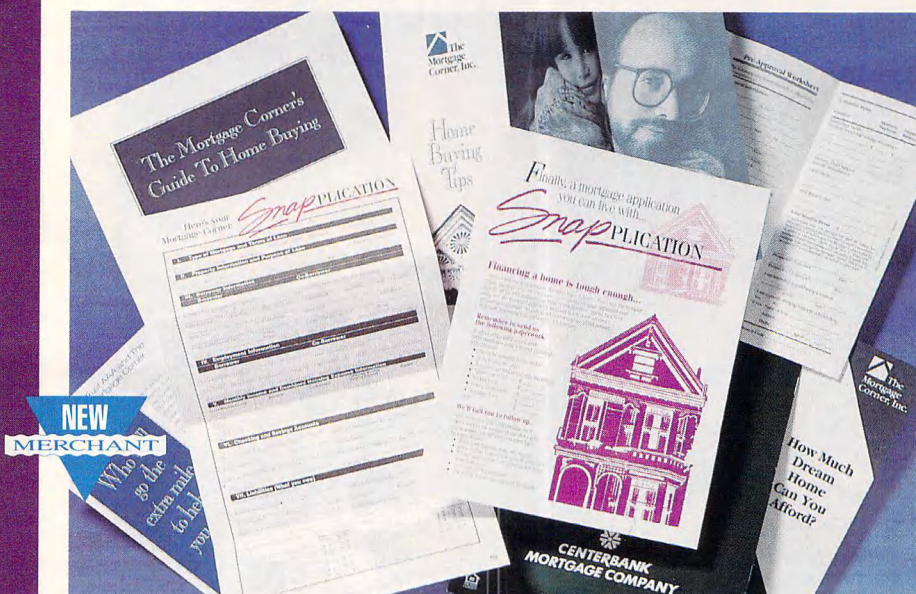
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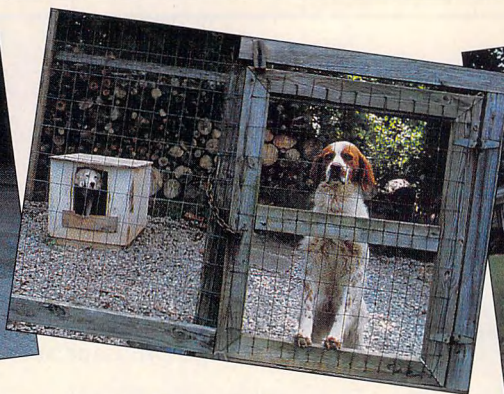
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## TECHNOLOGY UPDATE



# Could this be your dog?

New product by **Radio Fence** creates a hidden barrier to keep your dog in your yard and out of trouble. Finally, you can protect your dog from traffic and other dangerous situations without locking him in a pen.

By Charles Anton

**A**ll dog owners have the same dilemma. On one hand they want to give their dog the freedom to roam and exercise. On the other hand, they are worried about his safety.

Up until now many people were forced to install a costly conventional fence. Not anymore!

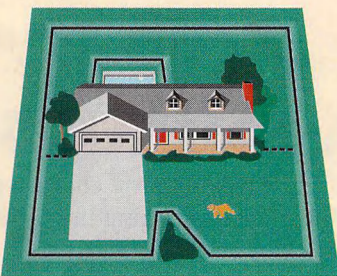
## No leashes or cages.

Now there's Radio Fence, the breakthrough alternative for dog owners. Radio Fence is an underground electrical barrier which works with a receiver on your dog's collar. It beeps your dog when he nears the boundary and gives him a small electrical correction if he tries to cross it. It keeps your dog safe and out of trouble without having to resort to expensive fences, runs ropes or chains that could injure your pet.

**A hidden barrier.** Radio Fence acts as a hidden barrier that gives your dog access to the whole yard but inhibits his movements into unwanted areas. Your prize-winning rose garden or pool will be safe. Unlike standard fences, Radio Fence does not detract from the beauty of your home or lawn.

### A hidden barrier that only your dog knows is there...

- No more ugly, expensive fences
- No more restrictive enclosures
- No more ruined flower beds
- No more knocked over trash cans
- No more complaining neighbors
- No more worrying about your dog's safety or protection



Radio Fence creates a hidden barrier around your yard that safely contains your pet.

## Safety and freedom.

Radio Fence will work with any size or breed of dog. The correction, which is similar to a static electricity charge, will not harm your pet in any way.

Plus, you can rest assured knowing that the Radio Fence system meets FCC requirements and is UL listed.

## Custom boundary.

The 500-foot roll of wire from Radio Fence can be easily installed in just two to three hours. The wire will accommodate up to a half-acre yard and comes with 50 free temporary boundary flags. The transmitter has a signal powerful enough to broadcast to approximately 25 acres, so if you want to expand your Radio Fence boundaries, simply order an additional roll of wire.

## Easy training.

By spending just fifteen minutes a day working with your dog, he could be fully trained in about two weeks time. The Radio Fence system is extremely effective because it allows your pet to control the corrective treatment (which is definite but mild) and he soon learns to avoid it.

## HOW DOES IT WORK?

**A** crystal-tuned transmitter plugs into a standard outlet and emits a radio signal that travels along an underground wire. (The wire only needs to be buried an inch or two to prevent anyone from accidentally cutting or tripping over it.) The 2.5-ounce receiver, worn on your pet's collar, picks up the radio signal and alerts him as he nears the hidden boundary that you have customized for your yard.

Keep your dog safe and out of trouble with Radio Fence.

If he nears the boundary, he will receive a small, electrical correction.



You can train as many dogs as you want on the same system as long as they are each wearing a receiver collar.

**Affordable fence.** The maintenance-free design, low initial investment, and ease of installation offer tremendous savings. Other solutions could cost you thousands of dollars. Radio Fence is an economical and effective alternative to fencing.



**Three easy payments.** For a limited time, the Radio fence system is available at a special introductory price. Order now and the Radio fence system (transmitter, receiver collar, and complete installation and training manual and instructional video) can be yours for only \$99. It will operate an unlimited number of receiver collars. A 500-foot roll of boundary wire is just \$48 and comes with 50 free temporary boundary flags. Credit card customers can use three monthly payments to purchase any of the Radio Fence products.

**Try it risk free.** All Comtrad products are backed by our "No Questions Asked" money-back guarantee. If you're not completely satisfied for any reason, just return Radio Fence within 60 days for a full refund. Radio Fence also comes with a one-year manufacturer's warranty.

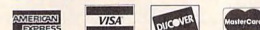
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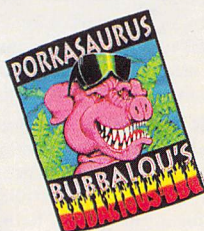
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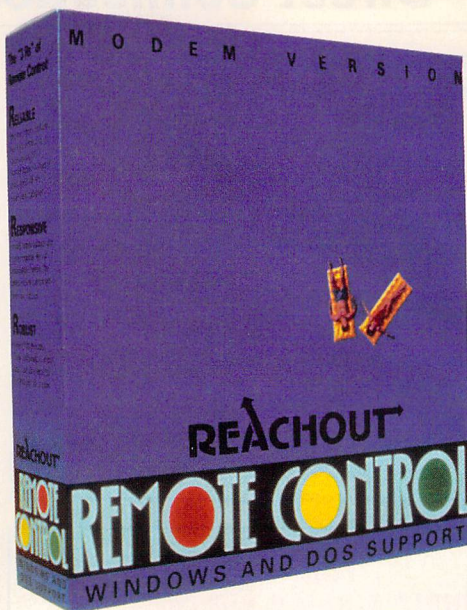
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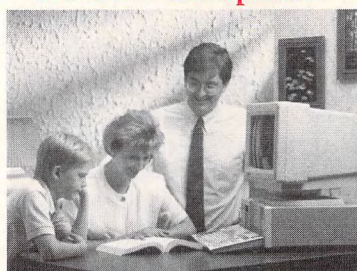


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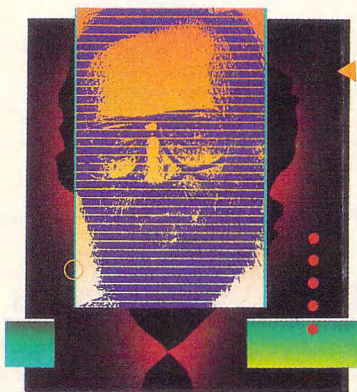
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with Charles Bowen



Charles Bowen is a contributing editor of *CompuServe Magazine*, author of *CompuServe From A to Z*, and co-author of *How to Get the Most out of CompuServe*, both from Random House.

**I'm looking for dictionaries accessible on CompuServe, especially bilingual dictionaries.**

**George Konjovic**  
Munich, Germany

For bilingual dictionaries, check out the Foreign Language Forum (GO FLEFO). When I searched the forum's libraries by the keyword DICTIONARY, I found dozens of them. (In fact, the list of just the file names and descriptions came to more than 30K, about 19 pages' worth!) In addition, CompuServe has an online dictionary, the (English-only) American Heritage Dictionary (GO DICTIONARY), from Houghton Mifflin Co., which contains detailed definitions of more than 303,000 words, phrases, people, and geographic locations.

**Where can I find abbreviations for countries (such as P.R. for Puerto Rico)?**

**Mark Miller**  
Sioux Falls, South Dakota

Check the Grolier's Academic American Encyclopedia (GO GROLIERS). At the search prompt, enter ABBREVIATION as the keyword. Grolier's then will display a menu of its assorted tables of abbreviations, including those for countries of the world. Other tables accessible from the same menu include those of abbreviations for the United States; Canadian provinces and territories; books of the Bible's Old and New testaments; units of measurement and time; Latin terms; grammar, syntax, and scholarship; personal, civil, and military titles and honors; scholarly degrees and religious orders; medicine and science; organizations; and more.

**I want to get stock quotes through CompuServe, but I don't know what the ticker symbols are.**

**Peter Springer-Ferazin**  
Pocking, Germany

Use the Issue/Symbol Lookup (GO SYMBOLS), which provides several features to determine what securities and indexes are covered in other securities areas and access the symbols needed to make efficient use of most databases. The Symbols menu includes:

—Name/Symbol Lookup (GO LOOKUP), which allows you to search by name, CUSIP number, ticker symbol, CNUM, or SIC code and lists all the issues for a company you select. Information on equities, debt, options, mutual funds, and market indexes is displayed, plus a report that shows the codes and symbols for each. No surcharge.

—Bond Listing (GO BONDS), which displays all active bonds for a company. The report displays the ticker symbols, CUSIP numbers, issue descriptions, yield, and current selling price for each bond. In addition,

a quality rating is provided, expressed by both Standard & Poor's and Moody's. Each bond displayed is surcharged at 5 cents.

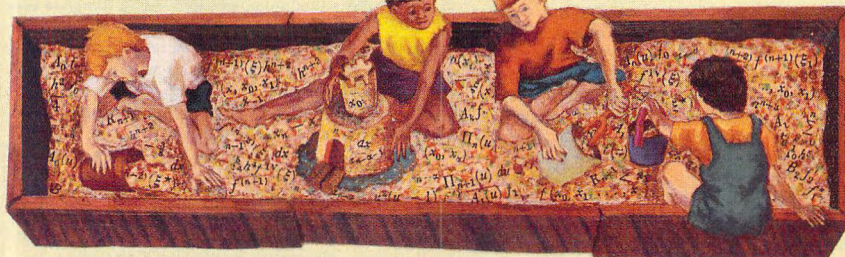
—Index Lookup (GO INDICATORS), which gives the ticker and CUSIP number of various indexes. They are categorized into manageable groups designated by market/industry indexes, bonds/yields, exchange rates, volumes, advances and declines, and any issues that are new or that don't fall into any other categories. Another option lets you list all the indexes without going through additional menus. Each index is updated daily. No surcharge.

—Commodity Symbol Lookup (GO CSYMBOL), which covers such commodity groups as foods, grains, metals, petroleum, fibers, currencies, and indexes. Access symbols, active contracts, exchange, where traded, and commodity description are shown for each commodity. No surcharge.

Send questions to CompuServe User ID number 70007,411. If your question is answered in this column, we'll apply a \$25 connect credit to your CompuServe account.

## Mensa® Puzzler

**This month's puzzle was submitted by CompuServe member Sunil H. Shah. You'll find the answer to this month's puzzle in the Mensa Forum's News Flash (GO MENSA).**



"I hear some youngsters playing in the backyard," said Jones, a graduate student in mathematics. "Are they all yours?"

"Heavens, no," exclaimed Professor Smith, an eminent numbers theorist. "My children are playing with friends from three other families in the neighborhood, although our family happens to be the largest. The Browns have a smaller number of children, the Greens have a still smaller number, and the Blacks the smallest of all."

"How many children are there altogether?" asked Jones.

"There are fewer than 18 children, and the product of the numbers in the families happens to be my house number, which you saw when you arrived," said Smith.

Jones took a notebook and pencil from his pocket and started scribbling. A moment later he looked up and said, "I need more information. Is there more than one child in the Black family?"

As soon as Smith replied, Jones smiled and correctly stated the number of children in each family. How many children belonged to the Smiths, the Browns, the Greens, and the Blacks?

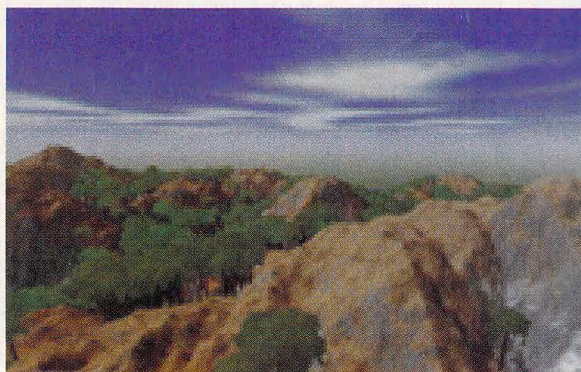
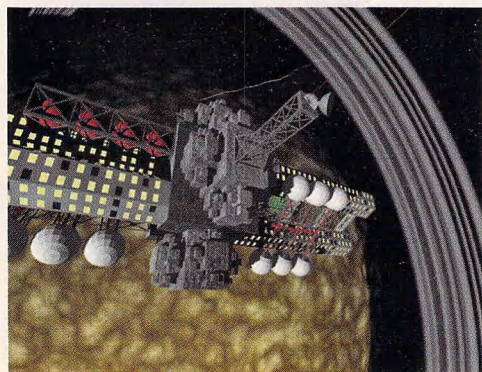
Do you have a Puzzler that you'd like to share with CM readers? Send your entry of no more than five brief puzzles (with answers) to: Puzzlers, *CompuServe Magazine*, P.O. Box 20212, Columbus, OH 43220. Include your full name, address, daytime telephone number, and CompuServe User ID number. Puzzles that are not sensitive to character positioning may be sent by CompuServe Mail to User ID number 76004,3302. If your puzzle is used here, we'll credit \$35 to your CompuServe account.



## Graphic of the Month



*CompuServe Magazine's* Graphic of the Month for October, *Teeth Care—What You Face Every Morning*, is a ray-traced image depicting toothbrushes, toothpaste, and a glass of water sitting on mirror tiles, composed by Andrey Zmievskiy. Zmievskiy created the image itself using Imagine 3.0, and the image map using Photoshop, all on a '486DX2/50 computer. The image resolution is 640 x 480. The image can be found in the Graphics Developers Forum's (GO GRAPHDEV) Library 19, "Imagine UG," as file TEETH.JPG (72,070 bytes). Zmievskiy is a Russian student studying at the University of Nebraska at Lincoln. He plays bass in a rock band and experiments with computer graphics using the ray-tracing and animation software packages 3D Studio and Imagine.



If you have a favorite image on CompuServe, consider nominating it as a Graphic of the Month. To do so, simply GO GRFMONTH and fill out the online survey. (Please note this is a new nomination process. Do not send nominations via the old method to User ID 76004,716.) If the image you nominate is selected as the Graphic of the Month, you and the image uploader/creator will receive a \$25 CompuServe account credit. Image uploaders/creators are permitted to nominate themselves, but only one \$25 credit is applied to each member.

This month's runners-up are *Space Station #3*, by Joshua J. Nelson, which can be found in the Autodesk Multimedia Forum's (GO ASOFT) Library 5, "Images/Animations," as file ORBIT3.JPG (344,064 bytes); and *Sandscape Hills Mountain Scape With Trees*, by Ronald J. Chapman, which can be found in the Graphics Plus Forum's (GO GRAPHPLUS) Library 16, "Fractals/Raytracing," as file HILLS.JPG (89,824 bytes).

### MEMBER ESSAY

## Czechs in the E-Mail, or How to Plant Yourself in Arizona

I use CompuServe from the Czech Republic and found an unexpected use for CompuServe Mail. One of my best friends in Czechoslovakia, Petr Chylik, a forester by training, wanted to live in the United States and work as an arborist in Arizona. I told him about a friend I had met in the "Baha'i" section of the Religion Forum (GO RELIGION) who lives in Phoenix, Arizona, and who has made several trips to Eastern Europe. He asked me to contact her. It turns out that her father worked for the Arizona Department of Forestry and could

be of valuable help. But Petr needed to pass the International Arborist Society's general qualification exam (with specificity to Arizona methodology) to obtain a work visa from the United States, so he needed study manuals from Arizona. My

Phoenix friend was going to visit Russia, and her flight just happened to stop in Prague. Petr met her, got all the books, studied like a madman for four months, and found out yesterday that he passed his exam and can get his visa. Would all this have been possible without CompuServe? Most likely not!

David H. Dunn  
Ceské Budejovice, Czechoslovakia

Compete for \$50 worth of connect-time credit in *CompuServe Magazine's* monthly Member Essay contest. Write a 200-word essay describing an original way you've used the Information Service and send it to CompuServe User ID number 76004,3302. Include your full name and address.



# UPDATE



CLAUDETTE BARIUS

## Stargate Contest

From Oct. 3 through Nov. 14, answer a weekly, multiple-choice question about the sci-fi adventure film *Stargate* and qualify to win a *Stargate* video game complete with a game system. In the film, Colonel Jack O'Neil, played by Kurt Russell (shown above), leads a team into a strange new world a million light-years from home. Other contest prizes to be awarded include CD-ROM programs, autographed movie posters, holographic watches, and chromium prints. GO SCENE



## Win Trendy Tee

Take a survey in BBDO New York's Trendsetter Hotline and qualify to win a T-shirt. Sponsored by one of the world's largest advertising agencies, the hotline features five areas, including a monthly survey for measuring opinions on cutting-edge subjects, an electronic magazine, an advertising I.Q. test, a contest area, and a conference area where BBDO reps discuss topics from interactive media to getting an advertising job. Each month, T-shirts are randomly awarded to 10 members who take the survey. GO BBDO

Access CNN Online to discuss news stories with CNN staff and fellow viewers. CNN offerings include the CNN Forum, the TalkBack Live Forum (which corresponds with a daily U.S. television talk show), and information about CNN and CNN International programming. GO CNNONLINE

A free IQuest Users Guide is now available for downloading. This ASCII-format guide takes you step-by-step through accessing and searching the more than 800 Iquest databases. You can also download the Iquest database directory. GO IQUEST

During October, use TRW Business Credit Profiles and save \$15 off the normal \$34 full-report charge. TRW Business Credit Profiles contain payment and accounts-receivable information for more than 13 million United States business establishments. GO TRW

First-time users of Business Database Plus and Computer Database Plus receive up to a \$5 rebate on surcharges incurred during their first session in October. With Business Database Plus, retrieve full-text articles from business and trade publications and industry newsletters. With Computer Database Plus, retrieve full-text articles or abstracts from more than 200 computer-related publications. GO BUSDB or GO COMPDB

Get comprehensive support for IBM PC products via the IBM PC Product Forums menu. The menu offers access to forums focusing on IBM PC Servers, PowerPC, PS/1, PS/2, ThinkPad, ValuePoint, and Options by IBM. GO IBMPCF

Pinpoint online areas for help and buying advice with the Support Directory, an index of all CompuServe computer-related product and support information. The directory navigates the nearly 800 hardware- and software-related services available and lets you search by product name or category, company, operating system, or local language to generate a list of areas specific to your needs. GO SUPPORT

Visit the Contemporary Motion Images Forum for state-of-the-art, AVI-format stock video footage for use in presentations. The footage includes some of the world's best time-lapse photography, all from Energy Productions' collection of 35mm cinematography called the Timescape Image Library. GO ENERGY

**NEXT MONTH • It's News to Me: CompuServers Head to a New Digital Media for the Headlines They Want • Font Fun: Programs to Manage, Make, and Manipulate the Typefaces • Fax Software: Using the Send-From-Your-Screen Titles • Battle of the Video-Game Boxes: Sega and Others Square Off • Gifted Kids: A Place for High-I.Q. Children**



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- Easy transfer of ownership
- And many more

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*Thom Hartmann,  
Sysop, Desktop Publishing Forum*

"In May of this year we incorporated with you and are extremely happy with the services you provided. With your services, you took the mystery out of incorporating and made Delaware law work for us. It's also nice to know that whenever we have a question, we can just dial you up (as we did quite a few times when we were filling out those S status filing and EIN application forms!). Thanks again for all your help!"

*Janice and Robert Pfister  
J&R Marketing Incorporated*

"I've now set-up four corporations online with The Company Corporation. Each time it was a pleasure to deal with them—the process was just as fast and easy as promised! Everyone I communicated with was very friendly and knowledgeable. I recommend The Company Corporation to everyone who needs to form a corporation."

*Julian Sorel  
Sorel Data Services*

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